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ABSTRACT

The report describes a K-6 career awareness project designed to: describe the major goals of an elementary career education program; assimilate the career education concepts into the curriculum; provide inservice training for administrators, teachers, and staff; and identify community resources of use in career education programs. A 40-page introduction discusses: (1) the procedures for the program's development, including project activities and evaluation procedures; (2) the career awareness teachers' workshop, organized around the U.S. Office of Education's 15 occupational clusters, with respect to organization, program, objectives, curriculum design, human resources, bibliography, and evaluation; (3) career awareness activities developed; and (4) dissemination. The remainder of the document consists of three appendixes: integrated career awareness activities (246 pages), which for each of the seven grade levels provides major projects, subject matter focus, career development concepts, teacher goals, student performance objectives, a wide range of suggested activities for various occupational clusters, and suggested human and material resources; suggested musical activities to correspond with occupational clusters (5 pages); and an annotated bibliography (15 pages), which lists books, audiovisual materials, kits, prints, puzzles, and games suitable for use in K-6 career awareness projects. (JR)

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MANSFIELD CAREER AWARENESS MODEL

GRADES -- K-6

Farmer City-Mansfield Board of Education

1975

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Workshop Director

CE 004 825

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Carol Sanders...Assistant Project Director
Workshop Director

MANSFIELD CAREER AWARENESS MODEL (K-6)

I - INTRODUCTION

A. Abstract of Project

Farmer City-Mansfield Unit #17 elementary schools received a Title III grant from the Illinois Office of Education for $14,227 to establish and implement a career awareness program for the 1975-76 school year. The bulk of the funds for the project were spent on a two-week summer workshop that took place at the Mansfield Elementary School Learning Center. Teachers from all elementary buildings in Unit #17 and a teacher from the neighboring town of Monticello participated in the workshop. Teacher participants received a stipend and could earn credit at Eastern Illinois University if they so desired. The purposes of the workshop were two-fold: 1) To complement and expand upon in-service training that had been focusing on career awareness. 2) To assimilate career awareness concepts into the elementary curriculum. As an end result workshop participants produced individualized classroom projects and a career awareness curriculum "guide". The development of individual classroom projects and curriculum document was facilitated by consultants from Eastern Illinois University, a community panel from the Farmer City-Mansfield area, involved administration, and visitations to other schools with career awareness programs.

B. Need for a Career Awareness Project in Farmer City-Mansfield Unit District #17

Many students complete elementary school without an awareness of changing technological advances in the world of work. In communities like Farmer City and Mansfield this problem is especially acute in light of the rural character of the communities and their isolation from many different kinds of work situations. Elementary students in the Farmer City-Mansfield elementary schools need to develop a greater awareness for changing technological advances in areas like health, transportation, and computer science.

Farmer City-Mansfield students need a greater exposure to economic patterns that are not indigenous to a rural community.

C. Objectives of the Career Awareness Program

Mansfield Elementary School was chosen as a pilot center for implementation of a comprehensive career education program for the 1975-76 school year. Seven Mansfield elementary teachers, along with six teachers from the Farmer City elementary schools, interested in incorporating career education into the curriculum were selected to participate in the program. To prepare for the implementation of a career awareness program, the administration, teaching staff, and citizens established priorities, wrote objectives, and developed curriculum for the program. The objectives of the Mansfield Model for career awareness were: a) To list and describe the major goals of an elementary career education program. b) To assimilate the career education concept into the curriculum. c) To provide in-service training for administrators, teachers, and staff to implement career education. d) To identify and use community resources in planning, establishing, operating, and evaluating a career education program.

D. Strategies for Accomplishing Program Objectives

Activities were designed to familiarize Unit #17 personnel with the career education concept. In-service training, visitations, news releases, and discussions at school board meetings provided district personnel with the background to become involved in a comprehensive program. Teachers and administrators visited Cumberland County, Illinois; Eastern Illinois University Career Education Resource Lab; Joliet; Peoria; Springfield; and Maryland schools to view career education in action and to search out practical classroom activities.

Assimilation of the career education concept into the curriculum was accomplished through a two-week workshop. Activities involved writing projects for student use in elementary classrooms. A general subject matter outline and a format for writing the curriculum was provided by the workshop director and consultants. The major portion of this document includes the teacher prepared materials. Another workshop activity was the identification of community resources by project personnel. A community panel followed teacher explanations of the program and encouraged community involvement for the program.

As a result of discussions with the workshop participants, it was decided that the major goal of the Mansfield Career Awareness Program would be to help students realize the relationship between school activities and the world of work. In order to accomplish this goal, activities would be geared to help students acquire a positive self-concept. Through implementation of the curriculum, students would become more aware of their interests and capabilities.

The Mansfield Program for the 1975-76 school year will revolve around self-awareness. The program will be designed to: 1) Help students become aware of opportunities in the world of work. 2) Help students become aware that some jobs differ according to the geographic location, and 3) Help students become aware that all work has dignity.

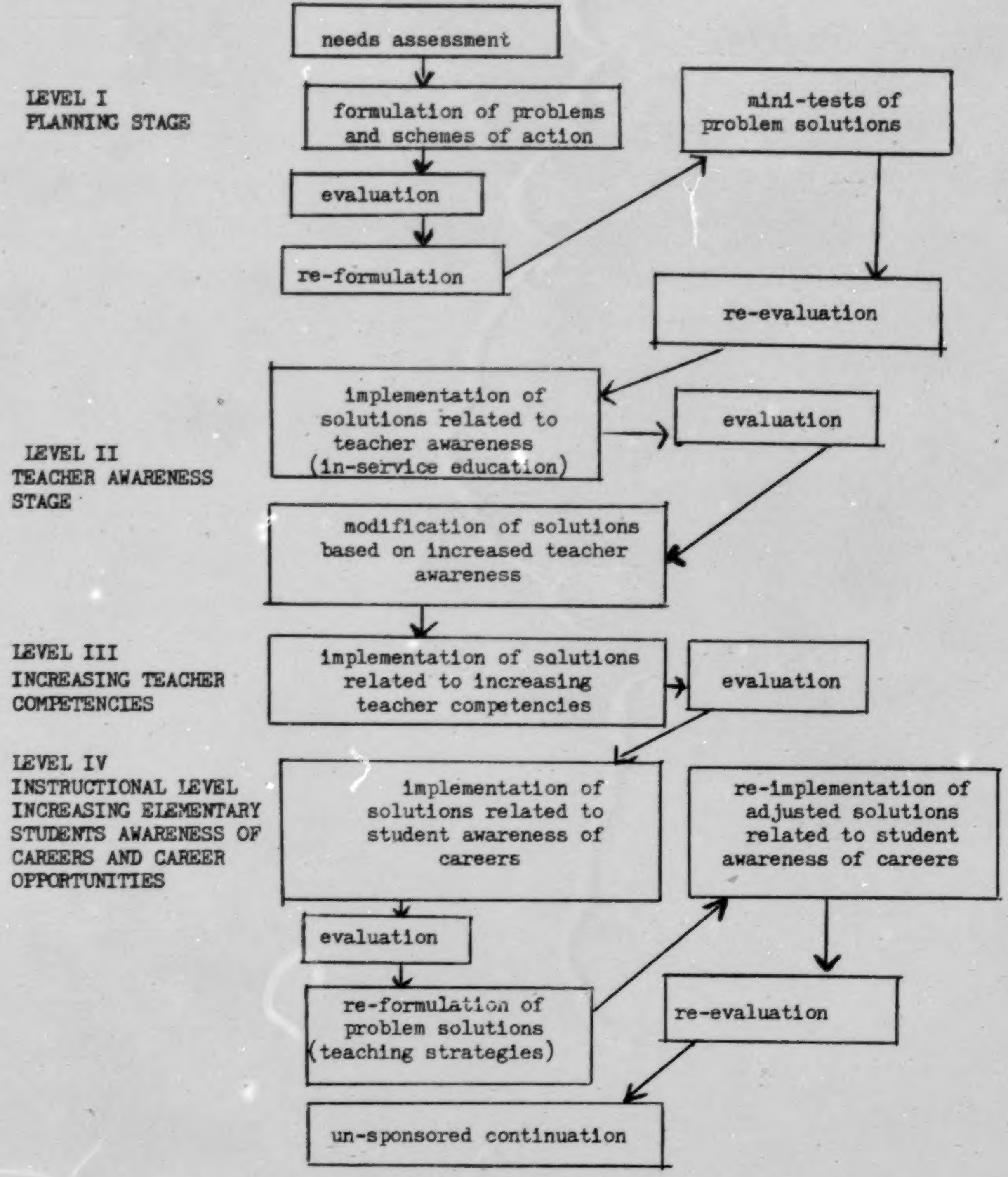
II - PROCEDURES FOR PROGRAM DEVELOPMENT

A. Explanation of Project Activities

The career awareness project was two years in getting started. After the original proposal was written in 1973, it was refined and resubmitted in 1974. Approval of the project was given near the end of 1974. Plans for in-service activities, the summer workshop, and implementation for the 1975-76 school year became finalized. The Mansfield Model for planning and implementing the program is depicted in the following flow chart:

CAREER AWARENESS MODEL FOR ELEMENTARY GRADES

(MANSFIELD MODEL)


LEVEL I
PLANNING STAGE
needs assessment
formulation of problems and schemes of action
evaluation
re-formulation
mini-tests of problem solutions
re-evaluation
LEVEL II
TEACHER AWARENESS STAGE
implementation of solutions related to teacher awareness (in-service education)
evaluation
modification of solutions based on increased teacher awareness
LEVEL III
INCREASING TEACHER COMPETENCIES
implementation of solutions related to increasing teacher competencies
evaluation
LEVEL IV
INSTRUCTIONAL LEVEL
INCREASING ELEMENTARY STUDENTS AWARENESS OF CAREERS AND CAREER OPPORTUNITIES
implementation of solutions related to student awareness of careers
evaluation
re-formulation of problem solutions (teaching strategies)
re-implementation of adjusted solutions related to student awareness of careers
re-evaluation
un-sponsored continuation

The development of a career awareness model for dissemination and use in Illinois will be the focus of the program developed for use at Mansfield Elementary School in the 1975-76 school year.

Some of the events that took place, are taking place, and will be taking place in the career awareness model are listed in the section that follows. The purpose of this section is to relate the Mansfield Model to actual occurrences. Administrators, curriculum planners, and teachers interested in organizing and implementing a new program will find this section useful as they formulate plans.

LEVEL I

Level I of the program involved planning activities and the two-week workshop. The project director interviewed teachers, administrators, and community members about their participation in the project. A workshop director was selected after recommendations from outside agencies and interviews. During the initial planning period the liason from the Illinois Office of Education was involved in evaluating the plans for the summer workshop and the selection of the director.

ACTIVITY	DATE	EXPLANATION
Initial planning	January	Selection of Workshop Director, set dates for in-service workshops, liason with state office, procure personnel for in-service
Director visitation, EIU	February	Begin negotiations for receiving college credit for workshop participants.
Ordering materials for workshop and 1975-76 school year begins	March	FC-M media Library coordinates all ordering after consulting with administration, teachers, and workshop director
Consultants and plans for workshop finalizes	May	

LEVEL II

Level II of the Mansfield Model involved increasing teacher awareness in the field of career education through in-service training and visitations. In-service sessions concentrated on defining career education. Consultants focused on the integration of career education concepts into the curriculum. Visitations to Eastern Illinois University's Materials Center and attendance at a workshop in Charleston, Illinois allowed teachers to explore the learning packet idea and its possible use in the Mansfield Model. The teachers rejected this idea as they reported their workshop experiences to the project director in conference situations. The teachers saw the integration of career awareness into the curriculum as a more viable alternative to learning kits.

At the onset of the project, teachers were given a career education attitude inventory. They were also given the opportunity to evaluate the in-service sessions through informal discussions and an instrument developed by the director. Administrators and teachers were also given the chance to visit schools in various parts of Illinois and Maryland. They formally reported to the elementary faculty as a whole on their visits. Thus, the evaluation of other programs helped staff members to clarify thinking on what they wanted for their own schools and classrooms.

ACTIVITY	DATE	EXPLANATION
Teacher participation in Learning Activity Packet Workshop in Charleston.	January	Teachers evaluate the Learning Activity Packet idea. Decisions are made to assimilate career awareness into existing curriculum rather than design kits or packets for hit/miss use. Teachers also visit Materials Center at EIU and become acquainted with their career education project staff.
Career Education attitude inventory developed	February	Director begins developing other instruments and summer workshop plans.
Teacher visitations to workshop director's project at EIU. Teacher visitation to Cumberland County Schools	February	Media director from FC-M visits Materials Center for second time. Other teachers begin looking at on-going career education programs.

LEVEL II - contd.

ACTIVITY	DATE	EXPLANATION
In-service	February	Dr. Marla Peterson from Eastern Illinois University begins in-service with a general orientation towards career awareness
Teachers attend an in-service session in a neighboring district.	March	FC-M and Monticello school districts begin working together. Three FC-M teachers attend a workshop which was given by our workshop director. The project director visits Monticello materials center and make arrangements for a teacher from Monticello to participate in the summer workshop at Mansfield.
Publicity begins	March	Project director appears on a local television short, news releases appear in local papers.
In-service	March	Dr. Peterson and Dr. Jackson from EIU continue orientation, present some practical ways of incorporating career education into curriculum.
Director visitation	April	Director visits U.S. Office of Education and three county school systems in Maryland.
Teacher visitation	April	Teachers visit schools in Joliet, Peoria, and Springfield.
In-service	April	Director made a movie and tape, and collected materials on visitation. This was a part of the in-service presentation. The rest of the presentation was done by teachers from their visitations. Evaluation of in-service and visitations.

LEVEL III

The Level III phase of the project concentrated on increasing teacher competencies in teaching career awareness. The activities at this level were centered on a two-week workshop at Mansfield Elementary School. The workshop allowed teachers to develop plans, incorporate human and material resources into curriculum and to design materials for use in classrooms.

Teachers evaluated their activities through a checklist prepared by the workshop director. Illinois Office of Education personnel visited the workshop and teacher-made materials were exhibited. Community members visited the workshop and participated in a panel discussion that was video-taped.

LEVEL III

ACTIVITY	DATE	EXPLANATION
Workshop director visits Mansfield (evaluation procedures finalizes)	March	Teachers meet workshop director and receive some background about summer program. The workshop director and project director begin to work with community liasons.
Workshop	June	Development of curriculum document, plans, and activities for assimilation into curriculum. Document finalized. Workshop evaluation.

LEVEL IV

This part of the program (1975-76 school year) will involve implementation of the activities developed during the summer workshop. Teachers will be encouraged to test and re-test ideas in their classrooms. Evaluation will be accomplished in three ways: 1) Student evaluation of projects and materials. 2) Teacher evaluations of lessons and units. 3) Outside consultants evaluation of curriculum and implementation.

ACTIVITY	DATE	EXPLANATION
Implementation	1975-76	Testing, evaluation, re-formulation, re-testing. Outside evaluators and unsponsored continuation.

B. Evaluation Procedures (Three instruments used in project evaluation are included on the following pages.)
Several methods of evaluation were used during the project:

1. Pre and post attitude inventories were given to all elementary teachers in Unit #17 at in-service training sessions.

2. Evaluation of materials for purchase by the district was accomplished by scrutinizing on-going programs using commercial materials. The materials ordered for preview were evaluated by teachers through use of evaluation instrument developed by Eastern Illinois University.

3. Evaluation of other career education programs was facilitated through on-site visitations. Teachers from Farmer City-Mansfield Unit #17 reported on other programs to all the elementary teachers at an in-service session in April, 1975. Feedback on visitations and in-service was obtained through written evaluation.

4. Work shop participants evaluated their experience in three ways:

CAREER EDUCATION INFORMATION INVENTORY

Grade level which you are currently teaching____

Please indicate the number of years you have been teaching____

Have you received any kind of career education training?____If yes, please indicate the type of training.

____undergraduate training
____graduate course
____workshop or short course
____in-service training
____other (explain)____

Read each of the following statements carefully and decide how you feel about it. The "undecided" answer should be circled only when you have no opinion. Please rate your feelings on the following scale:

1. SA - Strongly Agree
2. A - Agree
3. U - Undecided
4. D - Disagree
5. SD - Strongly Disagree

	SA	A	U	D	SD	
1.	1	2	3	4	5	Career information relative to what workers do, where they work, who they work with, what they wear to work, etc. should be presented in elementary school career education programs.
2.	1	2	3	4	5	Career education should be integrated into the regular curriculum.
3.	1	2	3	4	5	The community is an excellent resource to use in a career education program.
4.	1	2	3	4	5	Learning how to cope with work related situations should be part of an elementary school career education program.
5.	1	2	3	4	5	Elementary school is too early for a student to start thinking about career possibilities.
6.	1	2	3	4	5	A career education program should involve real life experiences.
7.	1	2	3	4	5	Schools should seek the advice of local citizens in planning and evaluating career education programs.
8.	1	2	3	4	5	Consideration should be given to the views of students in planning and evaluating career education programs.
9.	1	2	3	4	5	"Hands on" experiences are essential to a good career education program.
10.	1	2	3	4	5	It is important to involve parents in planning career education programs.
11.	1	2	3	4	5	The choice of an occupation or profession is one of the most important decisions a person makes in his lifetime.

	SA	A	U	D	SD	
12.	1	2	3	4	5	The primary conveyor of career information should be the teacher.
13.	1	2	3	4	5	Career education should be concerned with developing a positive self-image for each student.
14.	1	2	3	4	5	Career education and vocational education are one and the same.
15.	1	2	3	4	5	Career education is just another fad that will soon be forgotten.
16.	1	2	3	4	5	Career education should help students develop positive attitudes toward work.
17.	1	2	3	4	5	Prospective teachers completing teacher education programs should be prepared to teach career education.
18.	1	2	3	4	5	The educational program should provide students with experiences which show the relationship between subject matter taught in school and its use in the world of work.
19.	1	2	3	4	5	Career development is a continuous process throughout the lifetime of an individual.
20.	1	2	3	4	5	Experiences in career education should allow students to evaluate their interests and abilities.
21.	1	2	3	4	5	Career education should serve all students in a school system.
22.	1	2	3	4	5	Career education will be of greater long term value to boys than to girls.
23.	1	2	3	4	5	Special emphasis in career education should be focused on helping each student to succeed.
24.	1	2	3	4	5	Career education should include decision-making skills.
25.	1	2	3	4	5	Educating a student for change should be included in a career education program.

INSTRUCTIONAL MATERIALS EVALUATION INSTRUMENT

Career Education Resource Laboratory
Buzzard Education Building
Eastern Illinois University

Title: ________________________________ Date: ____________

________________________________ Cost: ____________

Publisher: ________________________________

Author: ________________________________

Grade Level: K 1 2 3 4 5 6 7 8 9 10 11 12

I. Packaging

A. Books

____ Text
____ Recreational

B. Audio-Visual

____ Film
____ Filmstrip
____ Sound Filmstrip
____ Film Loop
____ Tape
____ Record
____ Multi-Media
____ Other ____________________
____

II. Subject Matter

____ Language Arts
____ Social Studies
____ Mathematics
____ Science
____ Other

III. Job Clusters

____ Agri-business and Natural Resources
____ Business and Office
____ Communications and Media
____ Construction
____ Consumer & Homemaking
____ Environmental Control
____ Fine Arts & Humanities
____ Health
____ Hospitality & Recreation
____ Manufacturing
____ Marine Science
____ Marketing & Distribution
____ Personal Services
____ Public Services
____ Transportation

IV. Evidence of Stereotyping

____ American Indians
____ Blacks
____ Chicanos
____ Chinese
____ Men
____ Women
____ Other

	Yes	No
1. Materials contain career development concepts related to:		
a. Attitudes and Appreciations	____	____
b. Career Information	____	____
c. Coping Behaviors	____	____
d. Decision Making	____	____
e. Lifestyle	____	____
f. Self-Development	____	____
2. Materials represent a balance between subject matter concepts and career development concepts.	____	____
3. Objectives are measurable.	____	____
4. Materials contain cognitive learning experiences.	____	____
5. Materials contain affective learning experiences.	____	____
6. Materials contain psychomotor learning experiences.	____	____
7. Materials are relevant to the world of work.	____	____
8. Materials are feasible for use in the classroom.	____	____
9. Resource materials are listed.	____	____
10. Evaluation techniques are presented.	____	____

OVERALL USABILITY: Recommendations

Farmer City-Mansfield
Career Awareness Program Participants
Evaluation of Visitations & In-Service

List the career education programs you visited in preparation for becoming a Career Awareness Model Program?

Answer (Y) Yes, (N) No, or (U) Uncertain to the following questions. Respond to each question for both the (V) Visitation and the (IN) In-Service sessions held at Farmer City-Mansfield.

Y		U		N		
V	IN	V	IN	V	IN	Did the visitation or in-service:
						1. Help you further understand career awareness on the K-6 level?
						2. Introduce and explain career development concepts?
						3. Help you understand the importance of integrating career development concepts into subject matter areas?
						4. Help you understand the importance of utilizing community resources in a career education program?
						5. Stress the importance of ordering and utilizing appropriate career education materials for use within career education programs?

Comments?

Through formalized discussions of activities and a checklist of activity design; Through informal discussions with the consultants and director during the workshop; and through a formal instrument that focused on the total workshop experience that included a rating scale and open-ended questions.

5. During the workshop, teachers devised student evaluation instruments of their designed activities for use during 1975-76 school year.
6. Two outside evaluators (university consultants) will be employed during the 1975-76 school year to evaluate the on-going program.

III - CAREER AWARENESS WORKSHOP

A. Organization

The two-week workshop was organized to develop curriculum activities that would meet the goals of the Mansfield Career Awareness Program. In order to become a true career awareness program, the workshop was organized around the fifteen occupational clusters as defined by the United States Office of Education.

It was decided to follow the school year quarter system and concentrate on one occupational cluster each nine week period, exposing students to four occupational clusters each year. By the end of the third grade each student would have had one exposure to each of the fifteen clusters.

Curriculum for the intermediate grades (4-6) followed the same yearly cluster pattern as the primary level in reverse order with development of more detailed and advanced activities. (see organizational chart) In order for each student to have had two exposures to each of the fifteen occupational clusters before entering junior high, it was necessary to focus on seven clusters during the sixth grade year. The similar nature of the two clusters for the second, third, and fourth quarters allowed for smooth transistion or integration of activities.

All of the participants developed materials for their own grade level with the following exceptions: Mary Lou Luck offered to develop the first grade curriculum as this was the only grade level without representation, and the two participants with speciality, Pat Clapper (music), and Margaret Beard (media)

ORGANIZATIONAL CHART

September--→May

K----→	Business & Office Occupations	Marketing & Distribution Occupations	Communications & Media Occupations	Construction Occupations
1----→	Manufacturing Occupations	Transportation Occupations	Agri-Business & Natural Resources Occupations	Health Occupations
2----→	Environmental Control Occupations	Hospitality & Recreation Occupations	Personal Services Occupations	Public Services Occupations
3----→	Marine Science Occupations	Fine Arts & Humanities Occupations	Consumer & Homemaking-Related Occupations	
4----→	Construction Occupations	Communications & Media Occupations	Marketing & Distribution Occupations	Business & Office Occupations
5----→	Health Occupations	Agri-Business & Natural Resources Occupations	Transportation Occupations	Manufacturing Occupations
6----→	Public Service Occupations	Personal Services Occupations Consumer & Homemaking	Hospitality & Recreation Fine Arts & Humanities	Environmental Control Marine Science

worked with everyone by suggesting music and media to correspond with the activities.

B. Program

The outline of workshop activities revolved around the integration of career development concepts and subject matter concepts. In order to accomplish this, consultants from Eastern Illinois University presented techniques for designing activities to integrate career development concepts into math, science, language arts, and social studies the first week of the workshop. Time was spent in group work as well as individual project development. Concern was expressed by participants regarding occupational topics that might occur out of context. The group decided to take advantage of these "teachable moments" as they occurred and felt that they would not detract from the development and sequence of the occupational clusters.

During the second week, the participants previewed and designed materials for use in the activities developed during the first week. A community panel presented ideas for utilizing community resources to aid the career awareness program. Discussions were held concerning preparation and follow-up when using human resources in class projects. As a culminating activity, the participants canvassed the community and surrounding communities to secure names and addresses of people willing to donate their time and service to the Farmer City-Mansfield Career Awareness Program. This information was then compiled for the "Human Resources File for Farmer City-Mansfield." The page that follows is the schedule of Workshop activities. The Workshop activities and the schedule were incorporated in a graduate level course at Eastern Illinois University (EDP4780).

CAREER AWARENESS WORKSHOP
Mansfield Elementary School
EDP 4780--3 Credits
June 2-13
9:30-11:30 12:30-2:30

M	T	W	TH	F
2 Overview of Course Concept integration Dr. Marla Peterson	3 Math Focus Consultants: Dr. John Peterson Dr. Mike Leyden Techniques for integrating career development concepts into math	4 Science Consultants: Dr. Mike Leyden Dr. John Peterson Techniques for integrating career development concepts into science	5 Language Arts Consultants: Ms. Judy Barford Ms. Pam Hadwiger Techniques for integrating career development concepts into language arts	6 Social Studies Consultants: Ms. Judy Barford Ms. Pam Hadwiger Techniques for integrating career development concepts into social studies
List yearly subject matter focus Select Major Projects Outline for activity design "Let's Get Started" "Education-Who Needs It?	Project work: Integrate career development concepts into math focus--based on grade level major projects "Math-Who Needs It?"	Project work: Integrate career development concepts into science focus based on grade level major projects "Science-Who Needs It?" "Health-Physical Ed. "	Project work: Integrate career development concepts into language arts based on grade level major projects "Reading-Who Needs It?" "Language Arts- "	Project work: Integrate career development concepts into social studies based on grade level major projects "Social Studies-Who Needs" "Art & Music-Who Needs It?"
9 Material Resources Consultant: Ms. Joyce Spencer Preview of materials	10 Material Resources Consultant: Ms. Joyce Spencer Techniques for designing own materials for use in career awareness program	11 Human Resources Community Panel Discussion	12 Human Resources Make contacts with community people Each person is to get 2 commitments from each cluster total of 8	13 Finish activities Brainstorm "Teachable Moments" & come up with possible activities
Preview of materials	Design own materials for use in designed activities	"Field Trips Out of The Ordinary" Utilizing community resources Guidlines for resource people & field trips	Compile "Yellow Pages of Human Resources" for Mansfield--use CERL format Integrate into activities	Evaluate Workshop

C. Objectives (see following page for outline of objectives)

The major objective of the workshop was to design major projects to correspond with the four occupational clusters outlined for each grade level as shown on the organizational chart. Participants developed the first nine week major project in the four basic subjects, math, science, language arts, and social studies incorporating music, art, and physical education whenever possible. Outlines were developed for the second, third, and fourth nine week major projects thus establishing an overview of the entire Farmer City-Mansfield Career Awareness Program. It was felt that after having experienced the first nine week project, the program participants would be able to fully develop the remaining projects from the outlines developed during the workshop.

The second and third workshop objectives included listing appropriate commercial career education materials to supplement activities as well as designing learning techniques for appropriate materials to carry out planned exercises.

The final two workshop objectives involved the utilization of community resources. Participants became aware of ways in which they could utilize their community and surrounding communities in activities for their career awareness program. They became aware of community offerings and contacted people from the community and were able to list two human resources for use within each of the four designated occupational clusters.

D. Curriculum Design

Curriculum design revolved around the integration of career development concepts and subject matter concepts. The workshop director chose to have the participants work with the Seven Dimensions of Career Development as identified by Dr. Marla Peterson in the "Enrichment of Teacher and Counselor Competencies in Career Education Project" at Eastern Illinois University, Charleston, Illinois.

Three of these seven dimensions: attitudes and appreciations,

Workshop Objectives

I. Given instruction in techniques of integrating career development concepts into subject matter areas the participants:

   A. will design four major projects for their grade level based on four occupational clusters. (9 week periods)

   B. will fully develop one nine week major project in the area of math, science, language arts and social studies for their grade level.

   C. will incorporate music, art, and physical education into major projects.

   D. will outline the major projects for the second, third, and fourth nine week period.

II. Having attended material preview sessions the participants:

   A. will list material resources appropriate for designed activities.

   B. will be aware of available career education materials

III. Given instruction in techniques for designing materials for use in career awareness programs the participants:

   A. will design own materials for use with designed activities for career awareness program.

   B. will be aware of the types of materials available for use in designing own materials.

IV. After attending a panel discussion on Utilization of Community Resources, followed by discussion, the participants:

   A. will organize a career education field-trip or interview.

   B. will list human resources appropriate for designed activities.

V. After contacting people in the community the participants:

   A. will list two community resources for use within each of the four occupational clusters assigned to their particular grade level.

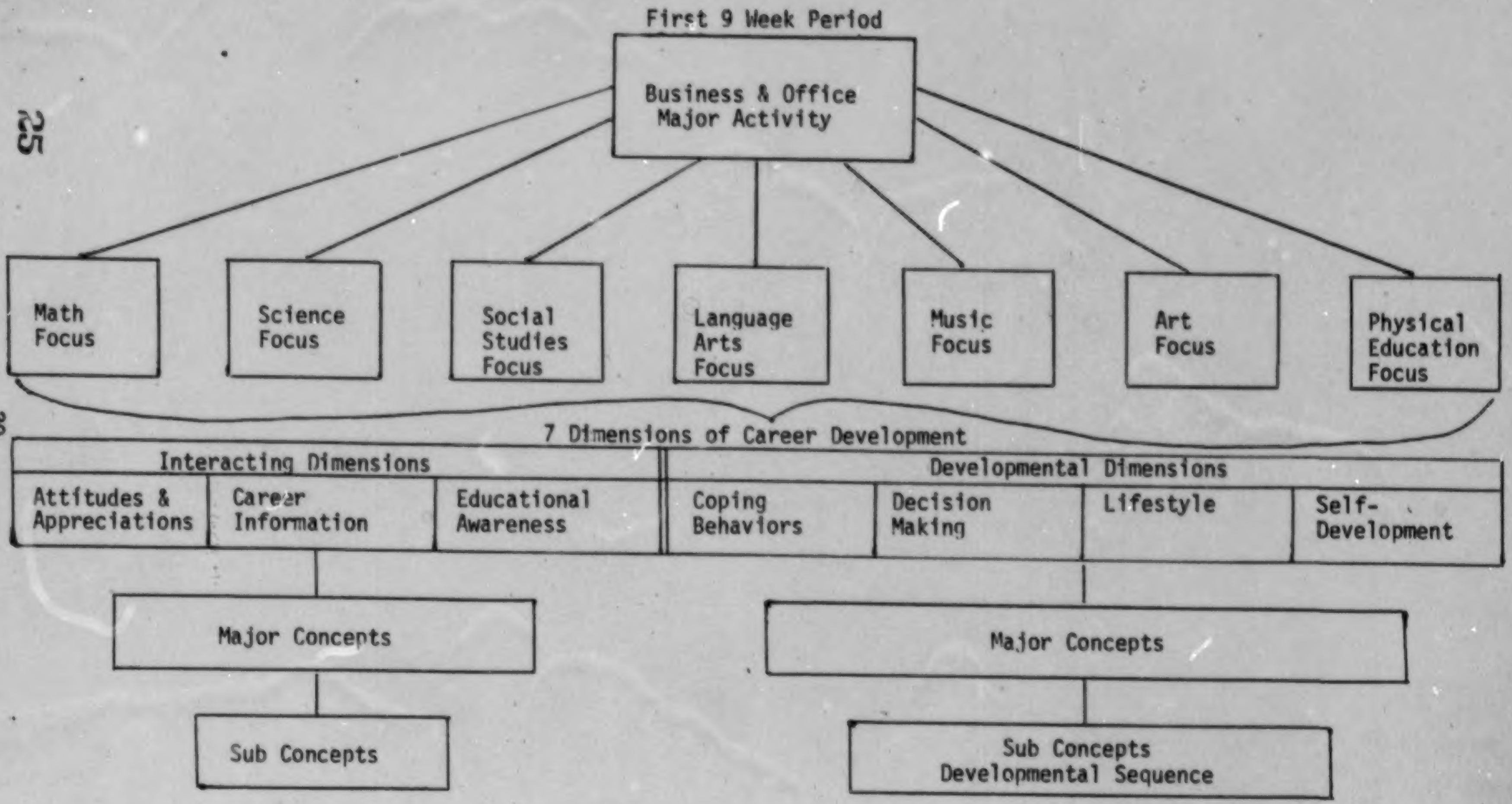
   B. will be aware of the resources the community has to offer the schools.

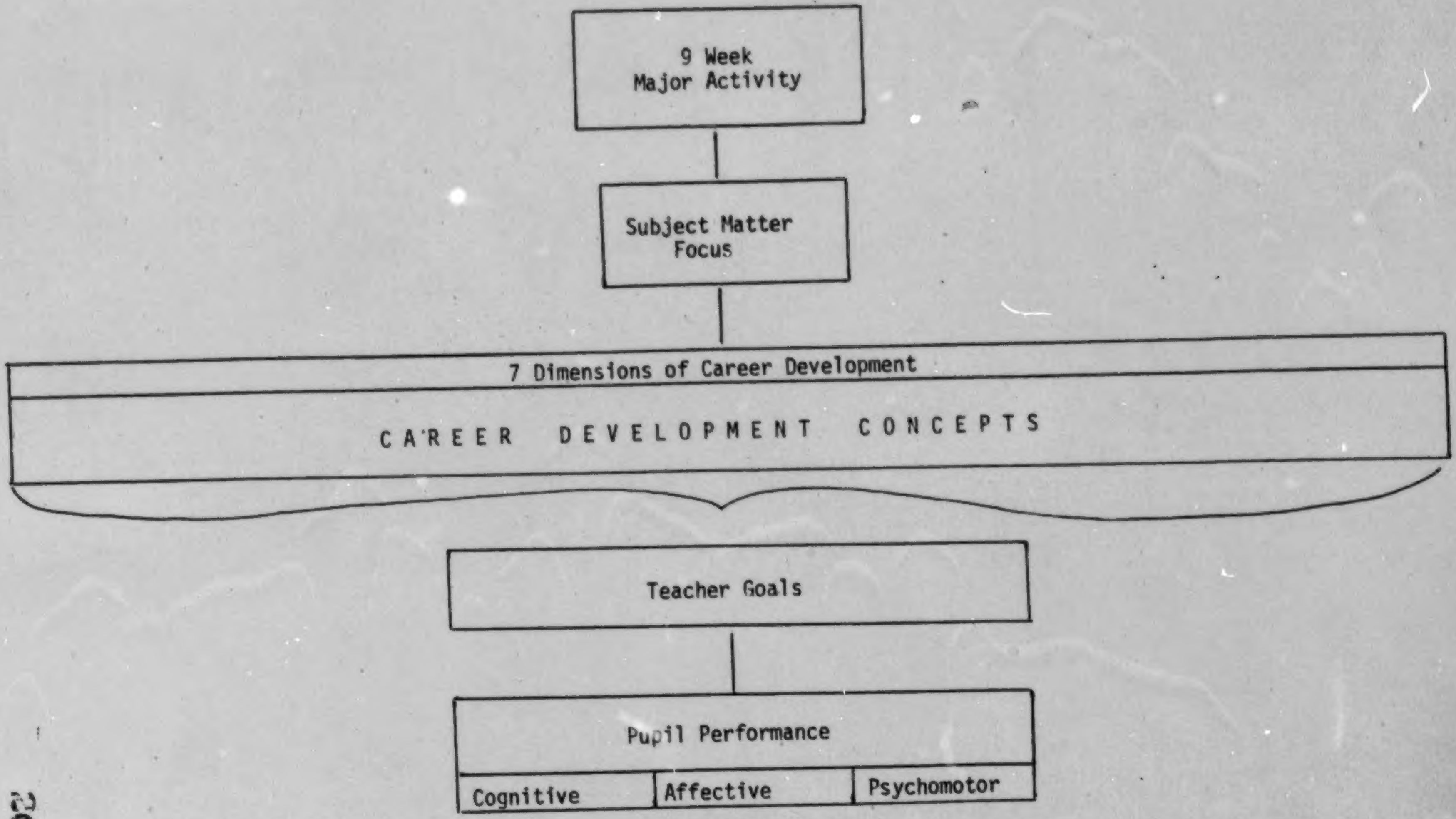
career information, and educational awareness are appropriate for all grade levels and interact with the remaining four developmental dimensions; coping behaviors, decision making, lifestyle, and self-development which follow a logical progression from simple to complex ideas. The participants were asked to integrate the concepts identified for their grade level as shown on the "Developmental Dimensions Scope and Sequence" charts.

Each participant was asked to design their activities following the format on the charts. At the onset of the workshop it was hoped that each grade level would develop their major activity for each of the four subjects, math, science, language arts, and social studies and infuse art, music, and physical education whenever possible. However, once work began it was realized that the subjects were inter-related and activity development became individualized. Some found it easier to work with all subjects at once while others chose to integrate math and science, language arts, and social studies. Others chose to isolate the subjects as per the original plan.

Since major projects varied from teacher to teacher, it became necessary to abandon the format of the Outline for Activity Development. Although all outline items were covered in the process of project development, each teacher's product reflects his/her individual classroom needs. The curriculum design for the project is diagrammed on the next seven pages.

K-6
DEVELOP ACCORDING TO GRADE LEVEL


First 9 Week Period
Business & Office Major Activity
Math Focus
Science Focus
Social Studies Focus
Language Arts Focus
Music Focus
Art Focus
Physical Education Focus
7 Dimensions of Career Development
Interacting Dimensions
Developmental Dimensions
Attitudes & Appreciations
Career Information
Educational Awareness
Coping Behaviors
Decision Making
Lifestyle
Self-Development
Major Concepts
Sub Concepts
Major Concepts
Sub Concepts Developmental Sequence


9 Week
Major Activity
Subject Matter
Focus
7 Dimensions of Career Development
CAREER DEVELOPMENT CONCEPTS
Teacher Goals
Pupil Performance
Cognitive
Affective
Psychomotor

1. Suggested Activities
2. Discussion Questions
3. Suggested Human Resources
4. Suggested Material Resources

FIGURE 6

DEVELOPMENTAL DIMENSIONS
SCOPE AND SEQUENCE

DIMENSION	MAJOR CONCEPT	SUBCONCEPTS FOR EXPERIENCE LEVELS READINESS THROUGH SIXTH						
		READINESS LEVEL	FIRST LEVEL	SECOND LEVEL	THIRD LEVEL	FOURTH LEVEL	FIFTH LEVEL	SIXTH LEVEL
COPING BEHAVIORS	Certain identifiable attitudes, values, and behaviors enable one to obtain, hold, and advance in a career.	An individual should learn to cope with authority exercised by others.	An individual should learn to cope with the rights and feelings of others.	An individual should learn how to give and take criticism.	A contribution to group effort can be made by demonstrating ability to both compromise and exercise influence in achievement of group goals.	Certain behaviors are appropriate to specific job settings.	There is a universality of feelings and aspirations of all people--regardless of physical appearance, nationality, creed, sex, or ethnic background.	There are effective interpersonal relations skills for giving or evaluating instructions.
	Individuals can learn to perform adequately in a variety of occupations and occupational environments.	Different skills are required for different tasks.	Several skills may be required to perform a given task.	Some skills can be transferred from one job to another.	Performance requirements for a job vary with the work setting.	Performance requirements for a job may change with time.	It is important for a person to be able to make the transition from one job to another.	There are characteristics which differentiate between occupations--both within and between job families.
DECISION MAKING	Life involves a series of choices leading to career commitments.	Choice means "making up one's mind" and there are certain situations where one can make choices.	Things change and these changes influence the choices and decisions one makes.	An individual's decisions affect himself and others.	People change and these changes influence the choices and decisions one makes.	Decision making involves risks.	Decision making can precipitate chain reactions.	Previous decisions, peers, gratifications, needs, interests, and career information influence present and future decisions.
	Basic components of the decision-making process can be applied to the establishing of personal goals and the making of career-related decisions.	An individual should recognize what "a goal" is and learn how to set one's own goals.	Problems which conflict with one's goals can be identified and assessed.	An individual should consider alternative ways to reach a given goal.	Decision making plays a role in the setting of immediate and long-range goals.	The decision-making process can be used to set priorities in developing personal goals.	Setting goals can be enhanced by analyzing decision-making processes.	The decision-making process can be used to determine one's preferences, at that point in time, between various job families.

The "Developmental Dimensions-Scope and Sequence" Figure 6 & 7 were compiled by the Enrichment of Teacher and Counselor Competencies in Career Education K-6 Project, Eastern Illinois University, Charleston, Illinois.

FIGURE 6 (CONT'D.)

DEVELOPMENTAL DIMENSIONS
SCOPE AND SEQUENCE

DIMENSION	MAJOR CONCEPT	SUBCONCEPTS FOR EXPERIENCE LEVELS READINESS THROUGH SIXTH						
		READINESS LEVEL	FIRST LEVEL	SECOND LEVEL	THIRD LEVEL	FOURTH LEVEL	FIFTH LEVEL	SIXTH LEVEL
LIFESTYLE	Work affects an individual's way of life, in that a person is a social being, an economic being, a family being, a leisure being, and a moral being.	Most people work and there are many reasons why people work.	Family members perform work they are capable of performing, responsibilities are shared, and the family is an interdependent unit.	Lifestyles within a community differ.	Relationships exist between a person's occupation and the people with whom a person tends to associate.	Moral principles are an integral part of one's work life.	Relationships exist between desired lifestyles and career monetary rewards.	Leisure-time activities and interests may lead to a career, and one's career may, in turn, affect the amount and use of leisure time.
SELF-DEVELOPMENT	An understanding and acceptance of self is important.	Awareness of oneself within the context of the family structure is important.	An individual experiences various roles--friend, student, group member, etc.	There are certain physical, social, and emotional characteristics which make an individual unique.	An individual's feelings relative to happiness, fear, anger, loneliness, etc., are diverse.	A person's membership in a group affects the group as well as himself.	Interests and abilities mature and change as well as one's physical being.	There is a relationship between an individual's knowledge and acceptance of self and his career preference.
	Social, economic, educational, and cultural forces influence self-development.	An individual is influenced by other people.	The school can provide an opportunity to enhance self-development.	An individual's feelings and the feelings of others relate to commonly held beliefs and customs.	Groups outside of school influence an individual's personal development.	An individual is influenced by economic forces.	Changes in an individual influence his environment and changes in environment influence him.	An individual's values and personal goals are influenced by the values of other people.
	Individuals differ in their interests, aptitudes, values, and achievements.	An individual should be aware of the tasks that he performs and begin to determine his interests in these tasks.	An individual's interests, aptitudes, values, and achievements are not always the same as those of his peers.	An individual has social, physical, and intellectual aptitudes for various tasks.	Individuals differ in their physical characteristics.	Achievements in school and out of school are often dependent upon interests, aptitudes, and values.	An individual can differentiate between himself and others in terms of interests, aptitudes, values, and achievements in and out of school.	There is a relationship among interests, aptitudes, achievements, values, and occupations.

FIGURE 7 (CONT'D.)

INTERACTING DIMENSIONS
SCOPE AND SEQUENCE

DIMENSION	MAJOR CONCEPT	SUBCONCEPTS APPROPRIATE FOR ALL EXPERIENCE LEVELS (READINESS THROUGH SIXTH)
CAREER INFORMATION	Basic career information will aid in making career-related decisions.	Occupations may have certain dress requirements. Occupations require the use of specific materials and equipment. Occupations have their own vocabularies. The individual worker determines which aspects of an occupation may be pleasant or unpleasant. Occupations have their own work settings. Occupations require special personal characteristics. Earnings vary with occupations. Career development includes progression through stages of educational and occupational training. Costs of training for occupations vary. Technological, economic, social, and political factors influence supply and demand of jobs.

FIGURE 7

INTERACTING DIMENSIONS
SCOPE AND SEQUENCE

DIMENSION	MAJOR CONCEPT	SUBCONCEPTS APPROPRIATE FOR ALL EXPERIENCE LEVELS (READINESS THROUGH SIXTH)
EDUCATIONAL AWARENESS	Educational skills and experiences are related to the achievement of career goals.	Knowledge and skills in subject matter areas are helpful in occupational competence. Career-oriented learning may take place in school or out of school. Learning is a lifelong process. Learning achievement depends upon effort and ability.
ATTITUDES AND APPRECIATIONS	Society is dependent upon the productive work of individuals.	Completion of a worthwhile task has value for the worker and for society. Work involves the acceptance of responsibility for a task. A great many tasks can be performed by men or women. Most occupations include common expectations, such as punctuality, dependability, and avoidance of excessive absence. A given work setting requires certain policies and procedures. Specialized occupations result in an interdependent society.

Outline For Activity Development

Grade Level:

Occupational Cluster:

Major Project:

Subject Matter:

Subject Matter Focus:

Career Development Concepts: (major or sub concepts--if sub concept is used also
(Indicate Dimension) list major concept)

Teacher Goals:

Pupil Performances:

Suggested Activities:

Discussion Questions:

Suggested Human Resources:

Suggested Material Resources:

E. Human Resources

In order to be a career awareness program it is necessary for students to observe people at work not only in the school building itself but in the community as well. To meet the main goal of the Farmer City-Mansfield Career Awareness Program, to help students become aware of the relationship between school and work, it is necessary to take the school out into the community and to bring the community to the school.

To stress this need upon the community, a panel discussion was held during the second week of the workshop. Panel members included Mr. West, a businessman representing the Chamber of Commerce; Father Motsett, representing the clergy; Mrs. Williams, representing the Advisory Council; and Mrs. Ruckman, representing the school board. Mr. Green and Mr. Michael from the Educational Service Region, Dewitt County, and Mr. Dan Brauer from the Illinois Office of Education also contributed valuable input to the discussion.

After the workshop, participants canvassed the communities of Farmer City and Mansfield to identify people willing to donate their expertise and time to students involved in career awareness activities. Information was then filed according to clusters and compiled for the "Human Resources File of Farmer City-Mansfield" and made available to teachers from the Unit District #17. It was hoped that this would serve as a base file and be built upon as the program was implemented. Information was gathered using the form on page 28. Interviewing Guidelines, Resource People Guidelines, and Field Trip Guidelines developed by the Career Education Laboratory (CERL) project at Eastern Illinois University assisted the participants in their plans for utilizing human resources in program development. The next several pages include guidelines for interviewing and involving community people.

Name of Business ____________________
Address ____________________
Person to Contact ____________ Title ____________ Phone ____________
Type of Resource: ____ Field trip ____ on-the-job interviews
subject ____________ types of jobs ____________
length ____________

1. Is there any age group for which this field trip or on-the-job interview would be inappropriate? ____________ If so, what? ____________
2. When is the best time to visit your company? ____________
3. How many students can be accommodated at one time? ____________
4. Is there any cost involved? ____________ If so, what? ____________
5. Are there facilities for meals? ____________
6. Is there ample parking for a bus? ____________ cars? ____________
7. What can be seen, heard, tasted, felt, etc. that you feel is unique to your business? ____________
8. Would someone be able to come to the school to introduce the students to the tour prior to the trip? ____________
9. Do you have any special exhibits, films, tapes, etc. that you feel would be of interest to the students? ____________ If so, what? ____________
10. Give a brief description of the tour? ____________
11. Will a guide be provided? ____________
12. What safety precautions need to be observed during the visit? ____________
13. What would you like the teacher to do to prepare the students for the trip to your plant or business? ____________

Type of Resource: ____ Talk subject ____________
____ Demonstration length ____________

1. When is the best time for you to visit? ____________
2. Do you have any special displays or materials you can bring with you? ____________ If so, what? ____________
3. Is there any age group you would not be willing to speak to? ____________ If so, what? ____________

Type of Resource:
____ films
____ slides
____ pictures
____ books
____ pamphlets
____ posters
____ product samples and/or tools
____ other ____________

1. Will individual schools be able to obtain these materials from you? ____________

Comments? ____________

Please check the appropriate cluster:
____ Business & Office
____ Marketing & Distribution
____ Communications & Media
____ Construction
____ Manufacturing
____ Transportation
____ Agri-Business & Natural Resources
____ Marine Science
____ Environmental Control
____ Public Services
____ Health
____ Hospitality & Recreation
____ Personal Services
____ Fine Arts & Humanities
____ Consumer & Homemaking

INTERVIEWING GUIDELINES

Purpose:

We see the purpose of an interview to be an accurate personal way to obtain information. Famous social scientist, Gordon Allport, once said, "If we want to know how people feel, what they experience and what they remember, what their emotions and motives are like, and the reasons for acting as they do - why not ask them?"

Interviewing can be used as an effective way for students to gain insight into a wide variety of jobs and workers.

Methods and Techniques:

The following rules, which also apply to professional interviewers, generally should be followed by children:

1. The purpose of the interview, or some orientation to the interview, should be given at the start.

2. The interviewer should be friendly. He should seek to elicit and maintain the cooperation of the respondent.

3. The questions should be asked exactly as stated, and usually in the order given.

4. The responses should be reported as given. The interviewer should not show that he either agrees or disagrees with the answers. (It might be a good idea to have interview teams of two for each interview - one person to ask the questions and probe for the answers, the other to record what is being said.)

5. The interviewer should prompt or probe for some answers. This should be done especially when the answer is not clear, when it is very brief, or when the respondent is reluctant to answer. This is especially important.

Preparation for Interviewing:

1. Students should be aware of the purpose of the interview and also what the information will be used for.

2. Students should know who they will interview and contact that person for permission before the actual interview.

3. Role-playing should be used in the classroom as practice sessions.

4. Survey possibilities for interview in your community through the yellow pages.

5. Teachers should be aware and make students aware that misinformation may result from an interview. The worker may misunderstand the question, or he may not have enough detailed information that the student is seeking.

QUESTIONNAIRE

Person Interviewed______________________________

Person Interviewing______________________________

Date______________________________

I. Name of Occupation

General______________________________

Specific Name______________________________

II. Information About a Job

1. What are the different types of workers found in your plant?
2. What kind of work do the majority of employees do?
3. Is the work outdoors or indoors?
4. What are your job duties?
5. What are the educational and experience requirements for your job?
6. What are the physical requirements?
7. What is possible weekly or monthly earnings? (Don't force this if they don't want to tell you.)
8. What are the future opportunities?

The "Interviewing Guidelines" were developed by the Career Education Resource Laboratory Project, Eastern Illinois University, Charleston, Ill.

RESOURCE PEOPLE GUIDELINES

Preparation:

1. Make the initial contact.
2. Teacher should obtain background information in person so she can make the introduction.
3. Provide information to the speaker describing the type and number of students, the program, facilities, and equipment you can provide, things to cover, etc. (letter for this purpose attached)
4. Cover the area concerning the resource person before he or she comes to the classroom.
5. Give students some general knowledge of this person's field.
6. Talk about questions that they wish to have answered. (general). Have these organized so that all questions can be asked without repetition.
7. If question period lags, the teacher should ask questions to bring out things that haven't been covered thus far.
8. Have the resource person ask students "What do you think I do?" before he begins his presentation.
9. Follow-up of field trip for evaluation purposes.

FOLLOW-UP OF RESOURCE PERSON

1. Discuss things they learned from visit (what do they know now about this job that they did not know in the past).
2. Discuss:
    - a. What are the employment opportunities for these workers?
    - b. Would you like this type of work?
    - c. What characteristics do you have that would be valuable in this work?
    - d. What must you improve on if you were to go into this line of work?
    - e. What requirements (educational, physical, etc.) are necessary for this work?
    - f. What geographical factors, if any, determine the location of this type of work?

Letter to Resource Person:

Dear ______________________________:

My students are studying ________________________. We would like to have some first hand knowledge about this area. We are very interested in the work that you do at your job. Below are listed some areas that we would like to have included in your talk to the class:

1. Title of job.
2. Duties.
3. Training or preparation required.
4. Approximate starting salary - salary after ten years (average).
5. Have you been doing this same type of work all of your working life?
6. Demand for such a job.
7. Supply of workers for this occupation.
8. Physical characteristics needed.
9. Social characteristics needed.
10. Do you work alone or with others?
11. Do you need to get along and cooperate with other workers?
12. What school courses helped a great deal in preparing you for this work?
13. How do you feel after a day's work? Why?
14. Why do you work?
15. Do you like this job?
16. What are the good and bad points about it?
17. How and where training can be obtained.
18. Leave plenty of time for questions.

Listed below is some information you may find useful:

Subject area ______________________________

Number of students __________________________

Description of facilities and equipment available __________

____

Thank you very much for consenting to spend some time with our class.

Sincerely yours,

Teacher

The "Resource People Guidelines" were developed by the Career Education Resource Laboratory Project, Eastern Illinois University, Charleston, Ill.

FIELD TRIP GUIDELINES

I. Set up plans:

- A. Plan type of trip
  Are students interested in going?
  Is trip justifiable? (Can classroom provide same learning?)
  Reason for taking trip:
  1. Develop awareness of different workers.
  2. Helping them observe working conditions.
  3. Awareness of interdependence of workers.

- B. Preparation
  1. Permission from principal.
  2. Plans for transportation.
  3. Permission slips.
  4. Contact business tour establishment.
     - a. Permission to come and definite date and time.
     - b. Information given them.
       - 1) Number of children.
       - 2) Age and grade level.
       - 3) What material covered by children previously.
       - 4) Questions they might ask.
       - 5) Workers children may question.
       - 6) Do you have materials you would like us to go over beforehand or hand out on tour?
       - 7) Safety measures to be observed. (Check the resource section for precautions stated by companies.)

- C. Pupil/Teacher Preparation.
  Watch for:
  1. Working conditions.
  2. Training of workers.
  3. Duties of workers.
  4. Clothes they wear -- appropriate.
  5. Numbers of workers.
  6. Safety.
  7. Do they like this work?

  Our preparation for trip:
  1. Appropriate clothing.
  2. Safety -- conduct on tour.
  3. Courtesy (going and at tour base).
  4. Departure time.

- D. Follow-up.
  1. Did you enjoy the trip and would you recommend trip to others? Why? Why not?
  2. Discuss observations (C).
  3. Were all your questions answered?
  4. Which of these workers would you like to be?
  5. What did you learn on this trip that you didn't learn in the classroom?

FIELD TRIPS*

Grade 1

1. Talk on children's level.

2. Clear and audible voice.

3. Split groups so all can hear and benefit.

4. Give children ideas of what to look for before entering work area. If it is noisy, discuss briefly what will be seen, and then review after leaving the noisy area.

5. Emphasize the role of worker and not necessarily the product.

6. Emphasize qualities needed in workers:
    a. punctuality
    b. getting along with co-workers.
    c. responsibility to do your best.

7. Introduce workers as they are encountered on tour, with comments like "Mr.________________is the man who does____________________."

Grade 2

1. The guides and alternates should be chosen by the business so they are always the same people.

2. The guides should take the classes in smaller groups.

3. The guides should name the worker and let them tell what they do (like steno, janitor, manager, etc.) and what education they needed.

4. Send any equipment, posters, or information to each school.

5. Send guides sample report card to discuss the social aspects of a job (the second page of the report card -- tardiness, getting along with others, etc.)

*These are guidelines that you as the teacher can give to the company which you are visiting to help them prepare for your visit.

The "Field Trip Guidelines" were developed by the Career Education Resource Laboratory Project, Eastern Illinois University, Charleston, Illinois

Grade 3

Job Specifics:

Please spend more time telling the children more specifics about titles of workers, education or training needed, and uniforms or special materials needed. It would relate better to our trip's purpose. A general tour is not really teaching the children about the world of work. Also, a mention of social attitudes and habits which are essential -- getting along with others, accepting responsibilities, punctuality, initiative, etc. -- will impress upon the children that these must also be developed at an early age to be successful in a job later.

Guides:

If each business would designate a certain person to be the tour guide throughout the whole schedule, it would be more uniform in information disseminated. An alternate guide should be ready to substitute. He could be oriented in the same areas as the regular guide.

A periodic stop in certain areas to observe certain jobs and workers is more meaningful.

Before the tour starts it would help if the guide could talk to the group in a more quiet area and tell the children what to be looking for, safety hazards, the set up a few ground rules while visiting.

The children do not like to be "talked down" to, but rather in a language which they can understand. (clear, but not too technical)

Materials Handed Out:

Uniformity of materials taken home eliminates jealousy between students upon return.

Groupings of Children:

The children should be split into small enough groups so that all children will benefit from the field trip. Many places are too small to accommodate comfortably the whole group at one time. This will also help the children to hear the guide and thus become less restless.

Grades 4 - 5 - 6

Ideas for employers regarding things to cover during occupational field trips:

1. Title of occupations at your plant.
2. Duties of the workers.
3. Training or preparation needed.
4. Salaries (optional) beginning and ten year average.
5. Physical and social characteristics needed.
6. What school work was most helpful for your job.

F. Bibliography

Margaret Beard, Farmer City-Mansfield Unit #17 Librarian visited the Career Education Resource Laboratory at Eastern Illinois University to gain ideas for ordering commercial career education materials to supplement the career education activities. In addition, suggested materials were ordered and previewed by classroom teachers and students before purchasing for the program. The following bibliography (see Appendix C) includes materials selected by Mrs. Beard and existing materials appropriate for the career awareness program.

G. Evaluation

Evaluation of the workshop was two-fold. After developing the major project, participants evaluated their own activities by using the Workshop Activity Evaluation as a checklist to see if they accomplished the required task. On-going discussions were held with workshop director and consultants concerning the activity development.

Toward the end of the two weeks, the participants were asked to evaluate the workshop as a whole and list strengths as well as weaknesses of the program. The evaluation tools are included on the next two pages.

IV CAREER AWARENESS ACTIVITIES DEVELOPED

A. Kindergarten	business and office marketing and distribution communications and media construction
B. First Grade	manufacturing transportation agri-business and natural resources health

Farmer City-Mansfield
Career Awareness Participants
Workshop Evaluation

Complete the evaluation using the following scale:

(E) Excellent (G) Good (A) Average (F) Fair (P) Poor

E	G	A	F	P	
					1. As outlined, were the objectives met?
					2. How well was the workshop organized?
					3. Did the integration techniques aid you in developing your program?
					4. Were the materials presented appropriate to your future use?
					5. Will the information on human resources aid you in effective utilization of the community?
					6. Was the amount of work involved appropriate for three semester hours of credit?
					7. Would you recommend this workshop format to someone in another school district?
					8. How do you rate the career awareness program you developed?
					9. How would you rate the workshop over-all?

List the 3 consultants you think others would benefit most by hearing:

____

____

____

List the strengths of the workshop:________________________

____

List the weaknesses of the workshop:_______________________

____

Farmer City-Mansfield
Career Awareness Program Participants
Workshop Activity Evaluation

Complete the evaluation using the following scale: (Y) Yes (U) Uncertain (N) N

Y	U	N	
			1. Is the project activity appropriate for your grade level?
			2. Is the project activity based on the designated occupational cluster?
			3. Does your subject matter focus correspond with your grade level curriculum?
			4. Are your career development subconcepts integrated into your subject matter focuses?
			5. Are your teacher goals in line with the integration of the career development concepts and the subject matter focuses?
			6. Do your pupil performances contain? A. Cognitive learning?
			B. Affective learning?
			C. Psychomotor learning?
			7. Do your suggested activities correlate with the integration of career development concepts and the subject matter?
			8. Do your discussion question help students understand the integration of subject matter and career concepts?
			9. Are your suggested human resources appropriate for your activities?
			10. Are your suggested material resources appropriate for your activities?

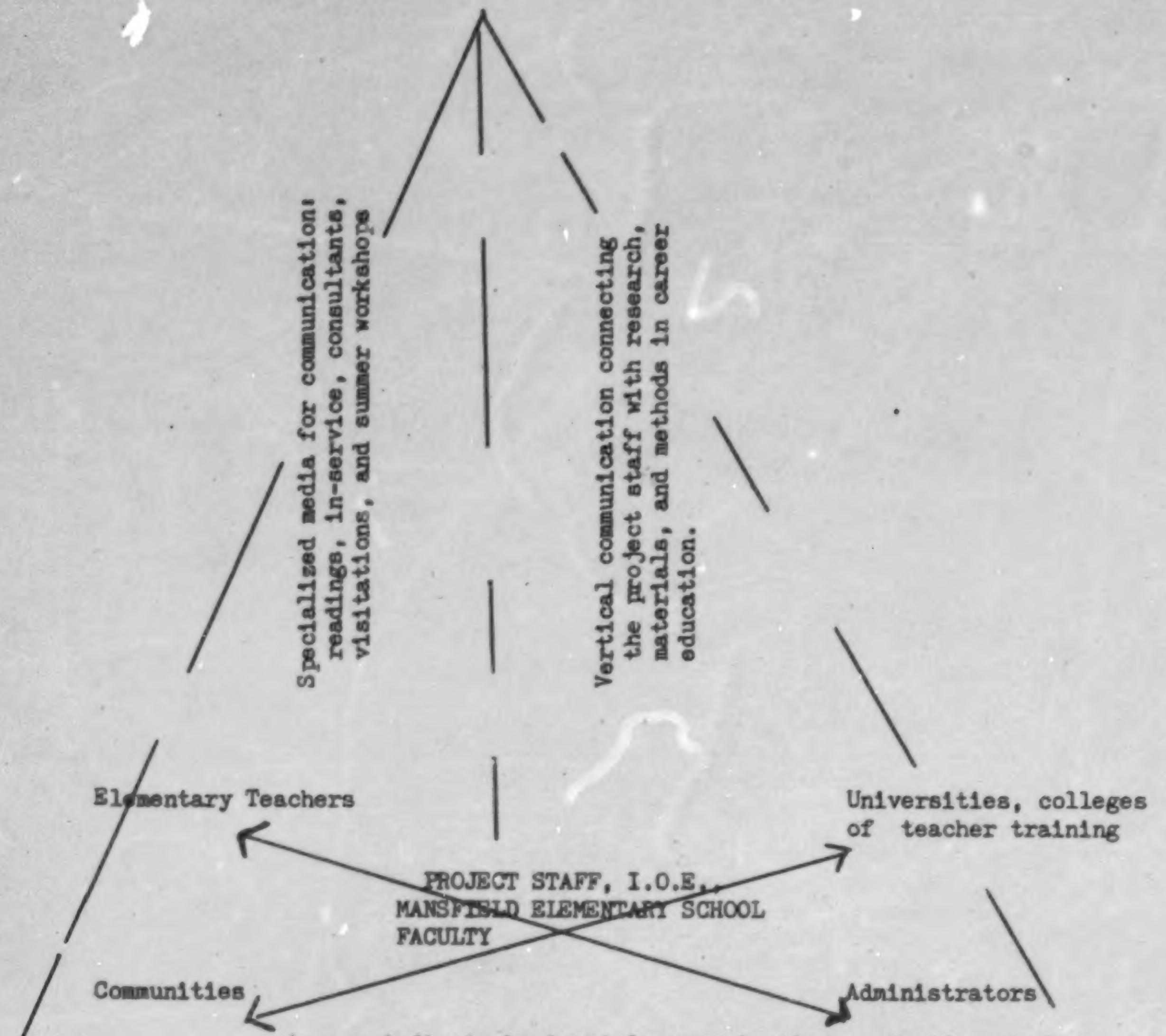
C. Second Grade	environmental control hospital and recreation personal services public services
D. Third Grade	marine science fine arts and humanities consumer and homemaking related
E. Fourth Grade	construction communications and media marketing and distribution business and office
F. Fifth Grade	health agri-business and natural resources transportation manufacturing
G. Sixth Grade	public service personal service hospitality and recreation consumer and homemaking environmental control marine science

V DISSEMINATION

Initially, dissemination of the program will revolve around visitations to Mansfield Elementary School and selected classrooms in Farmer City. The second aspect of the dissemination process will be the distribution of the Curriculum Guide and Final Report to the following agencies:

1. Farmer City-Mansfield Unit #17 Elementary teachers
2. Illinois Office of Education, Pupil Personnel Service
3. Monticello Elementary schools
4. Center for Educational Studies, Eastern Illinois University
5. ERIC Clearing House in Career Education, Northern Illinois University
6. Educational Service Region, Dewitt, County, Superintendent
7. Service Center for Educators of Gifted and Talented Youth, Champaign Region

DISSEMINATION OF MANSFIELD CAREER AWARENESS PROGRAM


Specialized media for communication: readings, in-service, consultants, visitations, and summer workshops
Vertical communication connecting the project staff with research, materials, and methods in career education.
Elementary Teachers
Universities, colleges of teacher training
PROJECT STAFF, I.O.E., MANSFIELD ELEMENTARY SCHOOL FACULTY
Communities
Administrators

Arrows indicate horizontal communication connecting project staff with other parties interested in career education at the elementary level. Curriculum guides, demonstration teaching, visitations, publications, and the use of agencies for distribution of ideas.

APPENDIX A

READINESS LEVEL

Occupational Cluster: Business and Office

Major Project: Secretarial Science

The specialization of keeping records, taking dictation, composing editing and creative writing.

Legal Stenographer
Court Recorder
Court Clerk
Medical Stenographer

Subject Matter Focus: Language Arts

Alphabetizing
Rhyming
Making associations
Developing motor co-ordination
Listening
Answering questions related to a story
Expressing oneself in complete sentences
Letter recognition
Color recognition
Associate the written word with things in our environment
Associate letters with words
Following directions

Career Development Concept:

1. Society is dependent upon the productive work of individuals
   a. A great many tasks can be performed by men or women

2. Choice means "making up one's mind" and there are certain situations where one can make choices

3. An understanding and acceptance of self is important.

4. Basic career information will aid in making career related decisions.

5. Awareness of oneself within the context of the family structure is important.

6. Individuals differ in their interests, aptitudes, values and achievements.

7. Choice means "making up one's mind" and there are certain situations where one can make choices.

8. Completion of a worthwhile task has value for the worker and for society.

9. An individual is influenced by other people.

10. An individual should be aware of the tasks that he performs and begin to determine his interests in those tasks.

11. Occupations have their own vocabularies.

12. Occupations have their own work settings.

Teacher Goals:

1. Call attention to a wide range of situations in which a choice is possible and permissable.

2. Structure experiences for individuals and groups in order to set up specific opportunities for making up their minds.

3. Help the pupil to identify some of his own completed goals.

4. Help pupils to set some suitable goals and check for their completion in a planned time.

5. Focus the child's attention upon people whom he meets frequently.

6. Lead children to identify ways that others make them feel.

7. Expand pupil understanding of the meaning of work as anything special a person does.

8. Increase the pupils' skill in categorizing their own tasks according to their skills.

9. Broaden pupil information about skills used by others.

10. Sharpen pupil perception of authority as responsibility to guide others.

11. Structure experiences giving pupils a chance to stimulate a role of authority.

12. Provide opportunities for pupils to pursue their interest in new and different tasks.

13. Encourage pupils to predict new tasks in which they might be interested.

Pupil Performances:

1. The pupil should express himself in a full sentence.

2. The pupil should become aware of various occupation names.

3. The pupil should express himself when making decisions.

4. The pupil should draw a picture to answer a question.

5. The pupil should tell what a person is doing by looking at a picture.

6. The pupil should fill in the name of a career when told something about that worker.

7. The pupils should work together toward a goal.

8. The pupil should tell how he has changed through the school year.

9. The pupil should identify most of a secretary's tools.

10. The pupil should identify their name in shorthand

11. The pupil should identify one tool with a written word.

Suggested Activities:

1. Use the Duso Kit from the beginning of school. Note the guidelines for the use of puppetry on page 23 and 24 of the Teacher's manual. Activities include group discussion, stories, songs, problem situations, role playing and puppet activities. This is an excellent way to teach the following concepts: accepting self, feelings, others, independence, goals and purposeful behavior, mastery, competence, resourcefulness, emotional maturity, choices and consequences. There are enough lessons for every day in the school year. 10

2. Career Alphabet - Have your students give occupations for each letter of the alphabet.

3. Read the poem "The Animal Store" by Rachel Field.

4. Ask what you would buy if you had a hundred dollars? Why did this boy buy dogs with his money? 20

5. Read the poem "Show Windows" by Rose Fylemon
   Discuss what you like to look at in store windows. Draw a picture of it. 20

6. Occupations Floor Puzzle - Includes occupations in the City
   - Mailman
   - Truckdriver
   - Cashier
   - Construction worker
   - Taxi Driver

   Activity: Discuss what each person is doing. What name would you associate with each activity. Write down each name and place over each person.

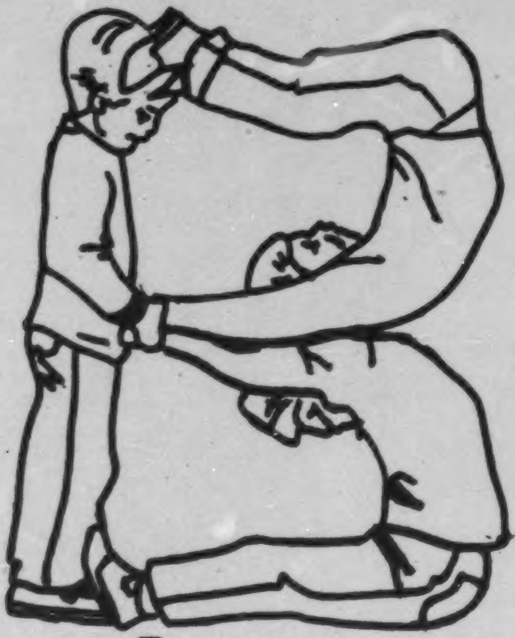
7. Read stories about various workers in the community:
   - Policeman
   - Doctor
   - Milkman
   - Mailman
   - Telephone Repair
   - etc.

   Make up riddles using the duties or functions of various workers for the children to identify. 5

8. "I can Be Anything You Can Be!" by Joel Rothman
List the occupations mentioned in the story. Discuss the other possibilities open to the children.
Why do you think that child chose that occupation?
What would you like to do? Why?
Draw a picture
Bulletin Board

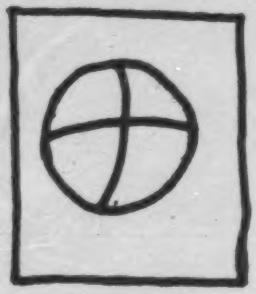
9. "Mommies at Work" by Eve Merriam
Tell what your mother does.
Invite mothers in to tell what they do.

10. Use The Living Letter poster. Assign a group of children for each letter. Give them time to make the letter. 16



BOTTOM

11. Friends do things together.
Color one part of the ball yourself, ask your friends to color a part. Let them use the colors they want. Make a ditto. 16



Self Awareness

12. Do you see?
    Fold a paper into four squares. Look at a friend. Look at him for 15 seconds. Now turn around. Don't look at your friend.

    Think of the four colors he was wearing. Pick four crayons that are those colors. Color each box with a crayon.

    Look at your friend. Are the colors right? 16

13. Growing and changing:
    Use construction paper and trace around a hand and a foot. Do at beginning of school year. At the end of the year, trace around again. How have you changed? 16

14. Signs that you are growing.
    Keep a record of the children as they loose their baby teeth. Everybody is not the same. People loose their teeth at different times. 16

Self-Development

15. Use the list on page 55-57 for a beginning values clarification activity. This activity would help open the children up to discussion. Additional pages for discussion are pages 81 to 93.

    An introductory exercise which is fun is on pages 95-97.

    "Whips" are an excellent way for students to become more aware of the degree to which they are proud of their beliefs and actions. It will encourage them to do more things in which they can take pride. Use pages 134 to 138.
    19

16. The purpose of activities on pages 181 - 182 is to develop a willingness to openly state and to stand up for our beliefs and actions. Learning to build trust in their classmates is also a goal. 19

17. An activity to give students an opportunity to ask questions to stimulate probing, critical attitudes. Use pages 166 - 167. 19

Associating words and things

18. Vocabulary:
    Boss
    desk
    duplicator
    file
    greets
    letter
    type
    office
    recorder
    secretary
    welcomes
    carbon paper
    drawer
    envelope
    eraser
    neat
    onion skin
    shorthand
    stamp
    stamp pad
    typewriter

Label things in interest center or list items seen in secretary's office after a visit. 15

Associating Letters with words. Following directions.

19. Set up an activity center as an office.
    Example: dentist, doctor, school secretary.
    Include: Table
    Telephone - obtain from General Telephone, Monticello
    Tape recorder
    Typewriter
    Ditto masters
    Onion skin
    Stamp pad with stamps
    Envelopes
    Carbon paper
    Play money
    Introduce each with an activity:

    Telephone activity - What do you say when you answer the telephone? Simulation of a secretary is also possible.

    Tape recorder - Record each child as he tells his name, address and phone number. Let the children operate the tape recorder.

    Typewriter - Let each child print his name. Instruct how the paper is put in, etc.

    Ditto masters - Have each child print his name on a master and run off on duplicator.

    Onion skin - Trace simple shapes or pictures.

    Stamp pad - Use the alphabet stamps. Let the children use the letters. Make sure the alphabet is displayed so they can check if the letter is upside down, etc.

    Carbon paper - Put a picture over carbon paper and trace the picture onto another paper. 1

20. To introduce children to the interview situation, use pages 151 to 157. Note also pages 158 to 159. 19

Simulation

21. Teacher puts on a hat or belt used by a certain occupation. The kids ask questions. Good practice before first interview.

22. "I Want To Be A Secretary" by Eugene Baker
Girls visit a secretary and see her take shorthand, use a copying machine, etc. Go into the attitude you must have toward people. R

23. Simulate a secretary at a desk. Use a play telephone. What would you say when someone asks for your address? Your name? Answer in complete sentences. 1A

24. Visit the secretary and have her write each childs name on a card in shorthand. The children may want to practice it and learn to read their classmates names.

25. Write a letter from the whole class thanking the secretary for the visit. Use chart paper. 2

26. Finish this story, "I want to be a secretary because...... Discuss why a person would want to be a secretary. What duties would be enjoyable.

27. Make a picture dictionary of new words while studying about a secretary. Dictionary could be on experience chart paper with pictures found in a magazine:

    This is a pencil (picture)

    This is a typewriter (picture) etc.

28. Make a ditto with each child's name. Run off in office.

29. Write to get free booklet "What's It Like To Be A Secretary?"

    United Business Schools Ass.
    1730 M Street, N.W.
    Suite 401
    Washington, D. C. 20036

Subject Matter Focus: Math
- categorizing
- listening
- counting
- identifying shapes
- sequencing objects
- sorting
- size relationships
- calendar
- time

Career Development Concepts:
1. Different skills are required for different tasks.
2. Choice means "making up one's mind" and there are certain situations where one can make choices.

3. Completion of a worthwhile task has value for the worker and for society.

4. Knowledge and skills in subject matter areas are helpful in occupational competence.

5. A given work setting requires certain policies and procedures.

Teacher Goals:

1. Structure an experience to evidence the value of practice and patience and persistance in pursuing a task.

2. Offer opportunities for the children to engage in many different types of activities.

3. Emphasize that everyone works with their body or mind.

4. Structure experiences for individuals and groups in order to set up specific opportunities for making up their minds.

Pupil Performances:

1. The pupil should identify envelopes by long and short.

2. The pupil should identify three different types of paper.

3. The pupil should count items used by a secretary (to 5).

4. The pupil should tell what comes next in a sequence of three items.

5. The pupil should sort items according to size (small, medium, large).

6. The pupil should associate common tools with a shape (circle, square, triangle).

7. The pupil should explain that a calendar records the days of the month with numbers.

8. The pupil should explain that a clock is used to tell time.

Suggested Activities and Discussion Questions:

1. Tape directions on recorder.
   Materials: three different envelopes - brown, long, short
   three different kinds of paper - oak tag, typing paper, onion skin
   Say: Put the onion skin in the brown envelope
   Put the oak tag in the short envelope
   Put the typing paper in the long envelope
   Put the onion skin in the short envelope
   Continue until all the paper is gone and the envelopes are full.
   (COULD ALSO BE USED FOR SOCIAL STUDIES)

2. Inventory:
    Tally books in room
    paper clips
    blocks
    etc.

3. Make paper chain starting with rectangles. Forming into circles. Use different colors to make sequence.

4. Trace and cut out shapes on different colored paper. Make a picture.

    Graph: according to size, shape, color used by he class as a whole.

5. Assorted secretarial tools: Sort according to use and place in secretarial corner. erasers, pencils, paper.

6. Size of paper - which is largest, smallest - stack from largest to smallest.

7. Match shapes with secretarial tools.
    pencil - circle
    eraser - rectangle
    ruler - rectangle
    etc.

8. Mark daily papers with stamp used by a secretary. Match stamp to date on calendar.
    Needed: Stamp pad
    Date marker

9. Group different colors of typing papers into groups of the same color hues.

10. Discuss working hours of a secretary. Compare to school hours.
    Activity: Make a clock
    Materials: Paper plates
    Paper fasteners
    Construction paper hands - precut
    Numbers on a ditto - 1 to 12
    Procedure: Cut points on hands
    Cut out numbers and paste on plate as model shows
    Push paper fastener through ends of hands and middle of clock
    Extension: Teacher sets hands on her clock and children do likewise 2

11. Watch clock for certain times during the day, a secretary may arrive to work, take a coffee break, eat lunch, go home.

Subject Matter Focus: Social Studies

Self-awareness
Friends can work together
People have different attributes
Values
Map reading
Relationship between businesses
Economics

Career development Concepts:

1. An understanding and acceptance of self is important.
2. Society is dependent upon the productive work of individuals.
3. An individual should recognize what "a goal" is and learn how to set one's own goal.
4. Work involves the acceptance of responsibility for a task.

Teacher Goals:

1. Focus pupil attention upon numerous tasks -- all the "can do's" which they perform at home, at school, and at play.
2. Guide pupils in comparing present interests with pre-school interests.
3. Focus pupil attention upon situations in which they themselves may have authority.
4. Interest the children in identifying their different skills.
5. Offer opportunities for the children to engage in many different types of activities.
6. Give pupils an opportunity to discover the variety of reasons why different people work.
7. Broaden pupil understanding of how they themselves influence others.
8. Help the pupil to identify some of his own completed goals.
9. Broaden the pupil's understanding of "goals" as something one tries or wants to do.
10. Encourage further decision making by being receptive to children's responses to decision making situations.

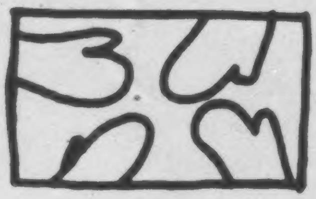
Pupil Performances:

1. The pupil should understand people are a part of the past.
2. The pupil should understand neat appearance is important to a job.
3. The pupil should follow through on assigned jobs.
4. The pupil should understand that good work is rewarded.
5. The pupil should recognize that he has grown.
6. The pupil should understand the symbols used on a map (houses, roads, etc.)
7. The pupil should explain the relationship between two occupations presented.

Activities:

1. Time Capsule
    - a. Find a big empty coffee can with a plastic lid.
    - b. Get some air mail stationery. It's thin and won't take up a lot of room.
    - c. Put what you want on your paper. (could be a picture of self.)
    - d. Ask your mother to cut a lock of your hair.
    - e. Tape that to your paper.
    - f. Put all the papers inside the coffee can.
    - g. Put the coffee can inside two plastic bags.
    - h. Bury the time capsule somewhere close to the school building or store it on a shelf.
    - i. Mark the place with a stake.
    - j. Wait a long time, maybe even a year. (suggest to open in spring)
    - k. Dig up the capsule and look at the things you put inside. 16

2. Helping hands in a group. On a piece of construction paper, draw four mit shapes.



Let each friend trace his hand on your paper. Now trace your own hand.

3. Secretaries do neat work. Set up a center using the poster "The New Clubhouse". Color according to the letters. Laminate the poster and use washable color tip pens. 16

4. Use This Group poster. Fill in the names of the people in the classroom that can do each thing mentioned. Included are such things as:
    Has the longest name
    Has the lightest hair
    etc.
   Note: Laminate first. 16

5. Using the ideas of these 32 cards, make a one word library pocket for each job in the room. Discuss what each job entails. Put children's name in the pocket. Change daily or weekly. Suggestions: Line leader, trailer, doorman, "Pledge to the Flag" Leaders, paper passer, etc. 17

6. To identify and discuss good work habits. Identify work activities for the children to complete every day during class discussion.

   Establish a reward system for good work. Example: Let each child earn "good time" points which can be used to purchase free play. 9

7. Have each child find out how long and what weight they were at birth. Record information on a wall chart. When all the information is in, have each child cut a piece of strip paper as long as they were. Measure and weigh each child and record. Discuss who was the shortest at birth, the longest, the most at the same length. Do the same with their present height and weight. 3

Name	Weight at birth	Height at birth	Weight Now	Height Now

8. Crow Boy by Taro Yashima
   What was the special thing that Crow Boy could do best?
   What are the things that you do best?
   Children draw a picture on story paper. Teacher writes below what each child does well as dictated by each child.

9. Identify several occupations that require some of the same skills needed by a secretary.
   Post Office, library, bank, telephone company, arrange materials alphabetically. Note during field trips.

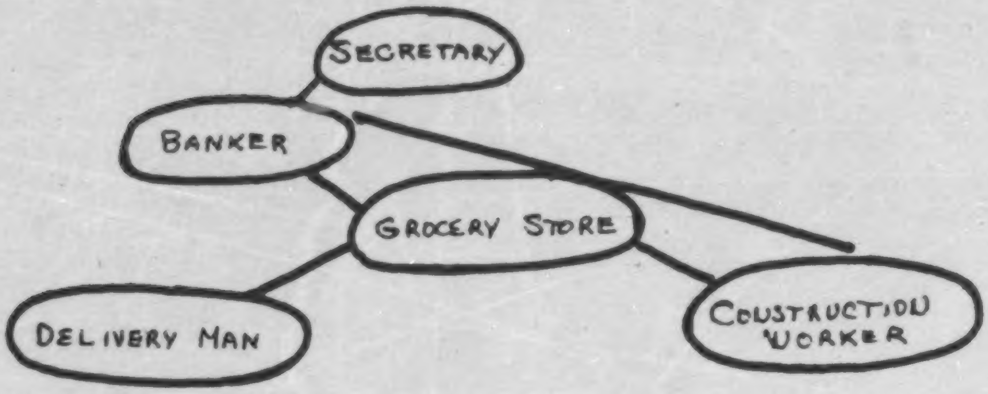
10. Let's Be Enemies by Janice May Udry
    Pictures: Maurice Sendak

    Discuss: What do you feel like when you are friendly? When someone is friendly toward you? Do friends always get along? What are some of the things friends fight over? What are some of the solutions?

11. On the map made of Mansfield, play a game of How To Get There. With a starting spot, have the children "walk" their fingers to the bank, general store, etc.

Map of Mansfield may be obtained from Farmer City Bank. 16

12. Mural that can be added to throughout the year.



Subject Matter Focus: Science

Sound makes things vibrate
Our relationship and our dependence
On nature
Similarities and differences
Categorizing
Health

Career Development Concepts:

1. Choice means "making up one's mind" and there are certain situations where one can make choices.

2. Specialized occupations result in an inter dependent society.

Teacher Goals:

1. Provide opportunities for pupils to pursue their interest in new and different tasks.

2. Offer opportunities for the children to engage in many different types of activities.

Pupil Performances:

1. The children should understand that sound makes things vibrate.

2. The children should tell about three steps taken to rid the city of garbage.

3. The children should examine things with a magnifying glass.

4. The children should use three different words to explain the texture of something.

5. The children should practice cleanliness in the classroom.

Activities:

1. Telephone - secretary uses a phone to communicate and receive information.

   Use an old speaker from a radio. Show that it vibrates by putting a little salt on it while it is playing. Speaker similar to that in a phone.

2. Where Does The Garbage Go? by Paul Showers
   Good pictures, long story. Explains where garbage goes - from home to landfill. Gets into pollution. Deals with paper. M.S. Library

3. Match paper that is the same. Use a hand lens. Note the strengths of different types of paper. What do we do with the paper once used? Where does the paper in the trash can go?

4. Categorize paper products. Categorize according to texture, color.

5. Alphabetizing is a skill needed for filing.
   Make 26 folders with Capital and small letters on the tabs.
   1. Match letters on 8 x 12 papers and put into proper folders.
   2. Match beginning letters of words and put in proper folder.
   3. Match labeled pictures of different occupations with beginning letters and put into proper folders.

6. Explore neatness as a secretary's asset.
   Check children's hands for cleanliness for a week.
   Put a star on a chart for the clean days.

   Would be a good time to get into nutrition and dental health.

Suggested Human Resource:

Parkland College Dental Hygiene - Students will demonstrate good dental care. Call well in advance.

Mrs. Cannon - Tri County Nurse

Subject Matter Focus: Physical Education

Career Development Concept:

1. Learning achievement depends upon effort and ability.

Teacher Goals:

1. Offer the children opportunities to engage in different activities.

Pupil Performance Goals:

1. Develop large muscle coordination

Activities:

1. Making strong muscles. Muscles need exercise. Exercise makes them strong. Most boys and girls run and jump. That is good exercise. Some boys and girls like tricks and stunts. Those are good exercise too. Can you do some of these tricks and stunts? Maybe you can make some up. 16

   SOMER SAULT
   BROAD JUMP
   WHEEL BARROW

2. Using my muscles. Your muscles work for you. You are the boss of your muscles. Tell your muscles to do these things.

   Stand on one foot
   Reach as high as you can
   Make an ugly face
   Stop breathing for 10 seconds
   Put up your left hand
   Lift up your little finger.
   Walk like this. (crab walk) 16

Subject Matter Focus: Music

Singing along with a melody
Self-awareness

Career Development Concept:

1. Different skills are required for different tasks.

2. An individual is influenced by other people.

Teacher Goals:

1. Encourage pupils to predict new tasks in which they might be interested.

Pupil Performances:

1. The pupil should begin to sing along with a group.

Activities:

1. Sing The Office Worker Song.
   On pages 66-67 of the teachers manual is included activities on role playing, printing, emotions, tools, addition, subtraction. 17

2. Your friend has a name. Friends use names. Sometimes a friend does not like his name. He asks you to call him by another name. This is a nickname. Play the record "What Is Your Name?" and instead sing "What Is Your Nickname". If they have no nickname, ask to make one up.

Subject Matter Focus: Art

Use different media to express an idea.

Career Development Concept:

1. Occupations may have certain dress requirements

2. Occupations require the use of specific materials and equipment.

Teacher Goals:

Help pupils categorize their acquaintances

Pupil Performances:

1. The pupil should associate pictures and tools with a secretary.

2. The pupil should bring in pictures from a magazine of different workers in a business or office. Make a class collage.

Activities:

1. Paper clip bracelet using the different tools of a secretary. First have children tell how each item is used.
    - paper
    - piece of typing ribbon
    - eraser
    - pencil

   Each child makes their own.

Suggested Human Resources:

Visit the school secretary. This will be one ofthe first interview situations. Review suggestions made on interviewing.
Hand out called Interviewing - General Guide.
Also refer to Career Education - Peoria Public Schools for Interviewing in the Classroom.

READINESS LEVEL

Occupational Cluster: Business and Office

Major Project: Grocery Store - Management - The co-ordination of planning directing and controlling activities of personnel.

Examples:
- Executive
- Supervisor
- Methods Examiner
- Manager (Owner)
- Teacher
- Public Relations

Subject Matter: Language Arts, Social Studies, Math, Science, Music

Subject Matter Focus: Language Arts
categorizing
words make sentences to express a thought
expressing self in a complete sentence

Subject Matter Focus: Social Studies
Experience with a map

Subject Matter Focus: Math, Science
Categorizing

Subject Matter Focus: Music
Making a poem to fit the music

Career Development Concepts:

1. Occupations have their own work settings.

2. Occupations have their own vocabularies.

3. A great many tasks can be performed by men or women.

4. An individual is influenced by other people.

5. Choice means "making up one's mind" and there are certain situations where one can make choices.

6. Different skills are required for different tasks.

Teacher Goals:

1. Broaden Pupil Information about skills used by others.

2. Give pupils an opportunity to discover the variety of reasons why different people work.

3. Help pupils categorize their acquaintances.

4. Call attention to a wide range of situations in which a choice is possible.

Pupil Performances:

1. The pupil should understand the map as a representation of Mansfield.

2. The pupil should tell workers that depend on a grocery store.

3. The pupil should sing in a group situation.

4. The pupil should classify foods found in a grocery store into five categories.

5. The pupil should tell about the tools needed by a grocery store.

Activities:

1. Using the career puzzles (DLM) divide the class into groups. See which group can finish each puzzle first.

2. Children make an experience chart on what they would like to know about a grocery store manager. Visit general store in Mansfield and teacher record answers to questions. When children return from the trip, match remembered answers with recorded answers. 7

3. Discuss why people continue to return to the same place to shop.

   Note: People who work in a store make it appealing. Friendliness to customers and care in making merchandise attractive.

   Extension: Each child tells what it is he enjoys doing, mention whether or not it is an activity which involves others. 8

4. Vocabulary - Discuss words associated with a store. Put on sentence strip. Child draws a picture related to each word. Match words on chart with those on word cards. 8

   store
   grocer
   money
   display
   cashier
   supermarket
   clerk
   customer
   job

5. To show how people who work in a community are responsible to others. For example: The grocery store manager depends on the milkman, the banker.

   Have the children role play. Discuss how these relationships are carried out. The grocer taking his money to the banker, etc. Then discuss what would happen if these people decided not to work anymore.

6. Set up a store in the room. Sort merchandise to classify food.
fruit vegetables meat milk cereals 7

7. The children match kinds of foods on a worksheet. Have them color the things that match. 7

8. Use the poster about the grocery man. 18

9. Building Match-ups
Match up tools and occupations associated with each building.
Examples: Grocery, Hotel, Drug Store
Discuss: Which might meet the services of a bank, a secretary, etc.

Activities:

Draw a map of Mansfield and identify the businesses in town.
Map may be obtained from Farmer City Bank.
Use bulletin board
Precut buildings:
    Grocery store
    Bank
    Barber Shop
    Post Office

Discuss and write what people work where. Use flags to label buildings with people who work there.

Subject Matter Focus: Music

1. To the tune of "Farmer In The Dell", encourage the children to suggest lyrics which would tell the story of grocery store workers: Store clerk, deliveryman, milkman, baker, etc.

The store clerk I see
The store clerk I see
He looks at me and the money he sees
Is exchanged for the food for me.

The breadman's truck I see
The breadman's truck I see
He's bringing bread and buns and cakes
and all good things for me. 7

2. Sing the Grocery Checker Song.
On page 33-34 are activities such as role playing, tools, word recognition, number recognition and emotions. 17

All Areas:

Included in this section is a unit (page 55 to 84) are various activities concerning a grocery store such as games for the gym, classification activities, role-playing, discussion of responsibilities. 8

Suggested Human Resources:

McKee's General Store - Manager, Mrs. McKee
Pointers on page 63 8

For money activities, see accounting.

Additional Business and Office Occupations:

Accounting
Finance and Insurance - Real Estate
Computer
Personnel
Office (Clerical)

Definition: Accounting - Science, art, or system of keeping, analyzing and explaining accounts.

Examples:
- Managers
- Cost Accounting
- Certified Public Accountant
- Systems
- Statistician
- Machine Accounting

Subject Matter Focus: Math

1. Completing an accounting act.
   a. Count and record the number of boys and girls present each day.
   b. Count and record the number of milks (chocolate and white) drunk each day.

2. Accounting records numbers of things.
   Each child is given a hand full of buttons:
   a. Separate into three piles
   b. Record number in each pile
   c. Exchange with partner to check counting.

3. Label items in a store between 1¢ and 5¢. Make money and give each child 10 pennies. Let them buy what they want and need. Discuss why they made those choices. Draw a picture of what they bought.

4. Make money out of construction paper and sort by size and shape. 7

5. Ask children to name a favorite food prepared at home. Record the information. Teach the use of tally marks for recording how many. Make signs for the favorite foods and give children counters to represent their food.

   Compare which column has most. Which has least using one to one matching. Hand the counters back to demonstrate one-to-one again. 8

Definition: Finance - Insurance - Real Estate

Finance is the science of money managing.
Insurance is the function of insuring against loss.
Real estate is the land, and what is erected, growing or affixed to the land and transactions involved in these functions.

Examples:

Finance	Insurance	Real Estate
Analyst	Attorney	Broker
Bank Personnel	Examiner	Salesmen
Auditor	Actuary	Clerk
Counselor	Clerk	Escrow Clerk
Teacher	Teacher	Appraiser
		Teacher

Subject Matter Focus: Language Arts:

Activities:

1. Find out how banks serve other businesses. Interview two people who work in or near the neighborhood. They may be the storekeepers, gas station workers, policemen, truck drivers, teachers, etc.

   Note: Make arrangements ahead of time and prepare subject for question. Take notes - teacher record recollections on experience chart.

   Ask: How long have you worked at this location? What services (or goods) do you provide? What bank services do you use? With which bank do you do business? 8

2. Careers in a Bank by Mary Davis
   Use the pictures. Have children try to explain what each worker is doing.

3. I Want To Be A Bank Teller by Eugene Baker
   Children take a tour through a bank. Could be used to get ideas for field trip. Write questions on experience chart.

4. Henry's Pennies by Louise McNamara
   Boy trying to decide what to buy with the money he has saved.

5. Written language cards - Careers
   Bank Teller Card
   1. Write in the words a bank teller might use
   2. Role play

Subject Matter Focus: Math

1. Field trip to a bank
   a. Observe the duties of the teller
   b. What are the roles of other workers in the bank?
   c. Develop an experience chart in the classroom.
   d. Compile a list of words related to each of the jobs.

2. Have the children make money to use in their supermarket. Use for classifying and sorting. Put all pennies together, etc. 7

Subject Matter Focus: Social Studies

Activities:

1. When the children do a good job on a paper, each child is given a token. These tokens will be "deposited" in the kindergarten bank. A bank teller at the end of the day will make a tally and record. After one week of "saving" we will start spending our tokens on the milk or cookies each day. Discuss how much each milk should "cost".

Definition: Computer - The electronic method of storing, calculating, correlation, selecting data of a specific nature.

Example: Programer
Key Punch Operator
Clerk
Data Typist
Console Operator

Definition: Personnel - Recruiting, interviewing, hiring and record keeping during the working career of an individual.

Example: Clerk
Counselor
Technician
Investigator
Administrator
Recruiter

Office (Clerical) - The office and clerical duties not requiring knowledge of systems or procedures.

Example: Clerk
Typist
Receptionist
Timekeeper
Business Machine Operator
Router

Subject Matter Focus: Language Arts

1. What do you say as a receptionist?

   Role playing. Each child introduces himself to another member of the class.

   "Hello, my name is.........." "What is your name?"

2. Written Language Cards - Careers
   Receptionist at a hotel.
   a. Write what a receptionist would say to those coming in on the cards.
   b. Role play a receptionist.

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3. Meeting People:
    a. Look at the people
    b. Shake hands
    c. Say hi

READINESS LEVEL

Occupational Cluster: Marketing and Distribution

Definition: Marketing Management: organizing, staffing, directing, controlling marketing activities.

Examples: General Management
Sales
Research
Promotion and Training
Distribution
Foreign Trade 4

Definition: Market Research and Analysis: Collecting, tabulating, analyzing and reporting marketing information

Examples: Collection of Data
Tabulation
Analysis
Reporting 4

Definition: Purchasing: Buying merchandise, materials, or equipment for resale or consumption.

Examples: Wholesale Trade
Retail Trade
Foreign Trade

Definition: Sales Promotion and Training: Creating a demand for a product or service, stimulating sales, and training sales personnel.

Examples: Designing and Forecasting
Advertising
Display
Demonstration
Customer Service
Training 4

Definition: Related Business Services: Arranging credit, financing and insurance.

Examples: Finance
Credit
Insurance
Clerical 4

Definition: Selling: Contracting and persuading customers, arranging and completing sales transactions.

Examples: Store Selling - Commodities
Store Selling - Services
Field Representation
Door-to-door Selling
Exporting
Other Selling Occupations 4

Definition: Physical Distribution: Storing, handling, and transporting goods between producer and consumer

Examples: Storage
Handling - Truck Driver 4

Major Project: Truck Driver

Subject Matter: Language Arts, Social Studies, Music

Subject Matter Focus: Language Arts
- interviewing
- role playing
- asking questions
- associating words with things
- finding similarities and differences
- left and right handedness
- self expression
- using symbols
- motor-co-ordination

Subject Matter Focus: Social Studies
- finding similarities and differences
- understanding relationships
- economic decision making

Subject Matter Focus: Music
- sing in a group

Teacher Goals:

1. Provide opportunities for pupils to pursue their interests in new and different tasks.

2. Focus pupil attention upon the numerous tasks--all the "Can Do's" which they perform at home, at school and at play.

3. Expand pupil understanding of the meaning of work as anything special a person does.

Pupil Performances:

1. The pupil should be able to formulate a question to be asked in an interview situation.

2. The pupil should match one word with a picture in a story.

3. The pupil should be able to note the similarities and differences of trucks.

4. The pupil should be able to state the outcome of certain actions.

Suggested Activities and Discussion Questions:

1. Invite the Meadow Gold milkman in for an interview.

2. Truck Drivers - What Do They Do?
   An I can Read Book by Carla Greene

   Experiences of a truck driver. Good pictures. Have children pantomime one of the experiences in the story. Have the others guess which experience it was.

3. Set up the road signs in the room. The children role play driving a truck and watching for road signs. Several children play the part of a truck driver. The truck drivers move around the room, turning the steering wheels as though they were driving trucks.
   a. Ask how road signs help truck drivers find their way so they won't get lost.
   b. What might happen to a truck driver if he could not read road signs? 17

4. Interview a truck driver to find out their skills and tools.

5. Travel Fun With Trucks. Using the Opaque Projector, read My Dad is a Truck Driver. The children fill in the picture words. Write words on cards. Next day match the words with the pictures. 13

6. Vocabulary:
   - road sign
   - hat
   - steering wheel
   - dump truck
   - boxes
   - crates
   - hand truck

7. I Want To Be A Truck Driver by Carla Greene
   Very easy. List the reasons after the story is read on experience chart paper.

8. This is a Department Store by Louis G. Romano and Nicholas P. Georgiody.
   Describes all the areas of a department store. Long story, good pictures. Compare the department store to the general store in Mansfield. How are they the same? How different?

9. All the children pretend they are truck drivers. Sitting in their seats and turning the steering wheels in the direction the teacher tells them (right, left, straight). 17

10. Have the children tell a funny or sad story about a truck driver. 17

11. On page 23 of teachers manual are some sentences related to page 15 in the workbook. Associating feelings with facial expression. 17

12. On page 12 of workbook, draw a line from the truck driver to his tools. In a role playing situation, have an interviewer ask a student truck driver what he needs on his job. 17

13. While Susie Sleeps by Nina Schneider
What goes on in a city during the night.
Includes: baker, truck driver, train engineer, milkman, newspaper, farmer.
Write down all the occupations on experience chart paper.

14. On page 13 of workbook, match up road signs. Discuss the color they should be. 17

15. Copy the picture of two trucks on page 11. Have the children trace the dotted lines. Color the trucks. 17

Activities:

1. Discuss different transportation pictures.
Note comments on back.
Included: trains, trucks, airplanes, barge, cement truck, moving van, gas delivery truck.
Ask in what way are two of the pictures alike. 22

2. Wake Up City! by Alvin Tresselt
Scott, Foresman Invitations To Store Time Program
Good Pictures. Activities in a city as morning comes.
Includes: bus drivers, ships, produce carriers, policemen, garbage collector, grocery man, taxi.
Ask what would happen if one of these stopped working?

3. Riddledee rye game.
"I am a truck driver, riddledee rye.
When I get paid, know what I'll buy,
and it's...." Give color and
have the children guess.
Page 23 of teachers manual gives some very good decision making stories about what a truck driver could buy. 17

4. Several children load boxes on trucks and several others are truck drivers. Each truck goes to the place where the trucks are loaded. The loaders load boxes on the trucks. The drivers drive to their destinations and the other loader unload the boxes. 17

Subject Matter Focus: Music

1. Sing Truck Driver Song.

2. Record (Creutzburg's) Pete Seeger Children's Concert at Town Hall

   I've Been Working on The Railroad.

   Discussion: How do you think the people felt about working? Making up new words for truck driver.

3. Play Peter-Paul-Mary record - This Train (Creutzburg) Make up new words for the song

Suggested Human Resources:

Ricky Hannah - Gilberts Trucking
  Home 489-4021
Gilbert Kirby - 489-2711
Meadow Gold Milkman

Suggested Material Resources: Filmstrips

Eye Gate - Learning the New International Road Signs
Introducing the New System
Recognizing the Signs and Markings

Movie Freewayphobia #25 - Color - 30 minutes
Cartoon - Problems and types of drivers
From Illinois Power Company

Careers with a Railroad - by Chris Meade

READINESS LEVEL

Occupational Cluster: Communications and Media

Definition: Motion Pictures: Creation and production of motion picture.

Example: Directors
Producers
Writers
Special Artists
Camera, Lights, Sound Personnel
Film Handlers
Costume, Make-up Personnel
Scenery, Props, Special Effects Personnel

Definition: Recording Industry: Creation and production of recorded sound.

Examples: Sales personnel
Administrators
Production Personnel
Engineers

Definition: Journalism: Involves the writing and editing of newspapers, magazines, and books.

Examples: Reporters
Copy and Proofreaders
Columnists and Critics
Manuscript Analysts
Specialized Personnel
Editors
Circulation Personnel
Advertising Personnel

Definition: Telephone and Telegraph: The Transmission of messages via wire and radio for both local and long distances.

Examples: Engineers
Translators
Administrators, Specialized
Managers, Supervisors
Technicians, Managers
Clerical, Sales Personnel
Bench Workers
Electrical Workers
Production, Distribution Personnel 4

Definition: Radio and Television Broadcasting: Creation, Production and Transmission of radio and/or television broadcasts.

Examples: Broadcast Preparation Personnel
Broadcast Presentation Personnel
Transmission Personnel
Administration, Sales Personnel
Service Personnel
Supportive Personnel

Definition: Satellite and Lazer Transmission: The transmission of aural and/or visual matter via satellite or lazer.

Jobs not yet delineated

Major Project: Postal Service
Mailman
Postal Mistress
Telephone repairman

Subject Matter: Language Arts, Science, Music

Subject Matter Focus: Language Arts
...draw a picture to express an idea
...extract meaning from a picture
...understand that letters form words which have meaning

Subject Matter Focus: Science
...Sound makes things vibrate

Subject Matter Focus: Music
...singing in a group

Career Development Concepts:

1. Work involves the acceptance of responsibility for a task

2. Specialized occupations result in an interdependent society.

3. An individual influences other people.

Teacher Goals:
Structure experiences for individuals and groups in order to set up specific opportunities for making up their minds.

Pupil Performance Objectives:

1. The pupil should be able to express himself in a full sentence.

2. The pupil should pick out familiar, repeated words from a dictated sentence.

3. The pupil should tell what a postman does as compared to the post mistress.

Activities:

1. Those Little Pieces of Paper
   Design a stamp for a certain holiday. Talk about what you think of for that holiday. Pick one for the picture. Look at some of the commemorative stamps issued by the post office. 14

2. Use the poster about mailman. Discuss the types of tools used by a mailman. His special clothes as well. 18

3. Write a weekly newspaper of things that happen in the classroom. Include such items as experience charts written, show and tell items, special accomplishments the children have done. One of the duties of the children could be to take it down to be run off at the office. Another would be to distribute to class.

4. Written Language Cards - Careers
   a. IV Comentator - write in on cards what the comentator might say.
   b. Using a sentence strip, record what the children say as they simulate being a TV comentator.

Subject Matter Focus: Science

Using an old speaker from a radio (obtain from Mrs. Cerutzburg) show that sound makes the air move by placing salt on the speaker as it vibrates. Discuss what is making the salt move. Discuss what is happening to the air around the speaker.

Subject Matter Focus: Music

Sing the Mail Carrier Song

Along with this song are various activities in role playing and a mail carrier's tools. A work book page with mailboxes is good. Match the names on the mailboxes. 17

Suggested Human Resources:

Post Office visit
    Postman
    Postmistress

Visit phone relay station

Suggested Material Resources:

Tommy and the Telephone - by Ellen MacGregor
Uses of a Telephone in a small town
Careers in Computers - by Jo Anne Ray
Careers with A Television Station - by Jo Anne Ray
    Good Pictures
You Visit A Post Office - Telephone Company - by Leonard Meshover
    Good Pictures - simple explanations
The Postman - by Laura E. Richards 20

Suggested Material Resources:

- Careers with A Telephone Company - by Mary Davis
  - Good Pictures - teacher would need to paraphrase explanation.
- Careers with the Postal Service - by Johanna Petersen
  - Good pictures - Teacher would have to paraphrase

READINESS LEVEL

Occupational Cluster: Construction

Definition: Engineering and Support Services: Utilizing engineering and technical supportive training.

Examples: Construction Drafting and Architectural Drawing
Estimating
Expediting
Surveying
Testing and Inspecting

Definition: Heavy Equipment Operations: Utilizing the operation and maintenance of heavy equipment

Examples: Equipment Operating
Equipment Maintaining
Material Distributing

Definition: Finishing: Utilizing finishing products and finishing building systems as primary assembling and working materials.

Examples: Painting and Papering
Insulating
Glass and Glazing
Sheetrocking
Floor Covering
Landscaping
Material Distributing 4

Definition: Electrical: Utilizing electrical materials, related electrical components, and electrical building systems as primary assembling and working materials.

Examples: Residential Wiring
Commercial Wiring
Industrial Wiring
Material Distributing

Definition: Masonry: Utilizing masonry, clay products, and masonry building systems as primary building, assembling and working materials.

Examples: Brick and Block Laying
Concrete Working
Tile and Terrazzo Working
Plastering
Material Distributing 4

Definition: Metal: Utilizing metal, metal products, and metal building systems as primary buildings, assembling, and working materials.

Examples: Sheet metal Working
Plumbing
Pipefitting
Air/Condition and Heating
Millwright
Material Distributing 4

Definition: Wood: Utilizing wood products, and wood building systems as the primary building, assembling and working materials. Included are occupations which by tradition and practice are normally included as part of the carpentry programs.

Examples: Framing
Flooring
Forming
Trimming
Roofing
Material Distributing 4

Major Project: Carpenter

Subject Matter: Language Arts, Science, Social Studies, Math, Music, Art

Subject Matter Focus: Language Arts
tell about a picture in a full sentence
associate words with a picture
retell a sentence dictated to the teacher and written down
categorize occupations
role play various occupations
retell part of a story and explain an alternative to what happened

Subject Matter Focus: Science
how weather affects workers jobs
how machines help man
shapes in our environment
using words to explain our five senses
understand the characteristics of structures, the ways they are the same and the ways they are different.

Subject Matter Focus: Social Studies
understand the relationship of man and structures
safety
categorizing
simulating
making associations

Subject Matter Focus: Math
- counting
- fractions
- measurement
- shapes recognition

Subject Matter Focus: Music
- sing in a group

Subject Matter Focus: Art
- use different media to express self

Career Development Concepts:

1. Different skills are required for different tasks.
2. Choice means "making up one's mind" and there are certain situations where one can make choices.
3. Most people work and there are many reasons why people work.
4. An individual should be aware of the tasks that he performs and begin to determine his interests in these tasks.
5. Knowledge and skills in subject matter areas are helpful in occupational competence.
6. Career orientation learning may take place in school or out of school.
7. A given work setting requires certain policies and procedures.
8. Specialized occupations result in an interdependent society.
9. Occupations may have certain dress requirements.
10. Occupations require the use of specific materials and equipment.
11. Occupations have their own work settings.

Teacher Goals:

1. Provide opportunities for pupils to pursue their interest in new and different tasks.
2. Increase the pupils' skill in categorizing their own tasks according to their skills.
3. Interest pupils in the ways different skills are required.
4. Increase pupil awareness of reasons why they themselves work.

5. Lead children to identify ways that others make them feel.

6. Expand pupil awareness of goals which others have.

Pupil Performances:

1. The pupil should associate certain tools with specific construction occupations.

2. The pupil should describe three different construction materials.

3. The pupil should construct a structure out of blocks or clay and toothpicks.

4. The pupil should tell if something is longer or shorter than a foot.

5. The pupil should associate three words with three construction tools.

Suggested Activities and Discussions:

1. Read the poem "Block City" by Robert Louis Stevenson 20

2. Discuss "Johnny" on Construction poster. Note tools and dress 21

3. Bulletin Board. Who Builds A House? Build an outline of a house, using narrow strips of brown or black construction paper, with more strips inside the frame to represent 4 or more rooms. Make a ranch style, a 2 story, or any style you like, with a sloping roof or one with several gables. Then use color pictures (from housekeeping magazines) showing various workers in different parts of the house (the painter, the plumber, the electrician, the carpet layer, the roofer, the cabinet maker, the upholsterer, the carpenter, the welder, appliance installers, etc.)

4. Cover picture with plastic and paste words. Use Richard Scarry's Best Word Book Ever. Children match words on page with words on small cards. Use page on construction site.

5. Describe the use and characteristics of the different carpentry tools. Let the children guess what tool it is.

6. Construction will be at the end of the school year. The children will have written stories about the different construction workers. Invite the preschoolers expected for the next year to hear the stories.

7. Brainstorm - categorize construction occupations by opposites

Happy work	Sad work
Active work	Sitting work
Clean work	Dirty work
Safe work	Dangerous work
Team work	Independent work

8. Change the action word into a career.

Action	Worker
Carpentry	Carpenter
Plumbing	Plumber
Paint	Painter
Paper	Paper
Truck	Trucker
Plastering	Plaster

9. House For Little Red by Margaret Hillert
Explore who the boy got his materials from.

10. If I Drove A Tractor by Mariam Young
All the things you can do with a tractor. Boy makes a swimming pool, digs hole and puts dirt into truck, cement mixer, trencher, pile driver, wrecker, mobile crane, grass mower, vacuum leafloader, snowloader. Very Good

11. Draw pictures of the tools used by construction workers.
    a. Match up the picture of worker
    b. Print name of tool below 5

12. Make a scrapbook as a class project. Cut out pictures from magazines and newspapers. Write the job titles under the pictures. 5

13. Ask children to role-play various construction occupations. 5

14. Read "Mike Mulligan and His Steam Shovel" by Virginia Burton
Discuss the alternatives Mike had at the end of the story. 20

15. Written Language Cards - Careers
Construction Worker picture card
    a. Write in what the construction worker was saying
    b. Role play

Science Activities:

1. Build tower out of blocks. Who can build the tallest tower? Read stories about towers.

2. Hammer - start with thumb tacks - hammer into a stump.

3. Construction machinery operators have seasonal work. Discuss what type of weather would prevent the various workers from working. 12

4. The construction worker may have to work outside during various weather conditions. On a calendar, mark the weather each day. Discuss what each type of construction worker might have to wear that day as dictated by the

weather. Using a reproduction of a worker, put the proper clothes on the model. 12

5. Explore why machines are necessary to help the construction worker.
Why does a crane or earth mover help a worker do his work?
Use a pully attached to the frame work on a breezeway.
Lift various objects.

Try pushing a person across the floor while sitting on a chair. How would a bulldozer help with this job? 11

6. Build a foundation and use a level and plumb line. Use the blocks in the room. What would happen if the foundation was not level? Try it. Write words introduced like level, plumb line, mortar bricks.

Roll play a mason. Use the tools of trowel, level, bricks, etc.

7. Use clay to make the various shapes. Roll out a long snake and form it into a circle, square, rectangle, triangle. Could use a ditto sheet with the shapes on them for starters. Have the children lay their snake along the lines. Then, for those able, have them form their own shapes. 11

8. Discuss the way various construction items feel and look.

	feel	look
Sandpaper	rough	bumpy
Nail	smooth	shiny
sawdust	curly	crumbly
cement	dry	dull
saw	sharp	shiny

9. Lego - Sorting by size and shape

10. The different types of construction. Read Three Little Pigs. Discuss what other materials the pigs could have used to construct their houses.

11. Cut out pictures of structures.
Buildings - what holds it up? Things that swing?
Make a collage.

12. Toothpicks and clay structures - construct structures using small clay balls to join toothpicks. Let the children experiment first. Then set some limits or rules to help construct a wider or taller building, bridge, etc.

13. Build a structure - bridge - building
    a. paper punch holes in end of straws to connect them.
    b. Pins
    c. Clay
    d. Staples
    g. Fusion Candle

Measure the structures - CM

Bridge - between two chairs or tables

14. Pictures of bridges to stimulate thought about structures.

15. Machines that help to construct the buildings. Cut pictures out of a magazine and put up on bulletin board or onto the pages of a class book. An explanation of the machine and who uses it should be put with each picture.

16. Discuss the role weather plays in the daily life of a construction worker.

Social Studies Activities:

1. Film--The Collapse of the Tacoma - Washington Bridge (Galloping Gerdy) - Obtain from Parkland

   Discuss what will happen when the bridge is cut. Why it fell apart. What they will have to do to make it again. Who will work at putting it back together again.

2. Explore the idea of safety in our work: i.e. bicycle, kitchen, etc.

3. Hammering, sawing, drilling using the appropriate tools. Make an apron and put tools in proper pocket.

4. Have students compare the different kinds of clothing worn and tools used by construction workers (electricians, carpenter, plumber) 5

5. Make a simulated construction site:
   Materials: toy vehicles
   clay
   sawdust
   sand
   ice cream sticks
   building blocks

6. Occupation Match-ups
   Includes: Mechanic, Construction Worker, Architect

   Match up small pictures associated with each career. Use with the whole group or in an activity center.

7. Career Identity Cards DLM
Match career personnel with an object readily associated with that career.
   a. Stimulate discussion as to why the association is made.
   b. Provide an interest in career alternatives.
To introduce the cards, discuss as a class. Put out in an activity center.
Includes: Construction Worker, Telephone Serviceman. 24

8. Plan an area in the room as a construction site. In the area place equipment children use in pretending they are construction machinery operators. Establish rules for play that are consistent with the ordinary rules of the classroom. Discuss the outdoor nature of construction worker's jobs. 12

Math Activities:

1. Build a house foundation with blocks. Count number of blocks on each side.

   Discuss: What you would need to complete house. Who would work.

2. Saw a board in half

3. Measure different pieces of lumber and tell if they are longer or shorter than a foot.

4. Trace shapes of buildings on overhead projectors. Use Vis-a-Vis.

5. Shapes - construct buildings

6. Nails - sort big and little. Screw on nuts and bolts of different size.

Music Activities:

1. Sing The Carpenter Song. Included is a job description, role playing activities, and emotions lessons. 17

2. Sing The Painter Song. Included on pages 79-80 are activities with role playing, motor co-ordination, addition, subtraction, emotions. 17

3. Sing The Plumber Song. Included on page 68-69 are role playing activities, emotions, activities and games. 17

Art Activities:

Visit Lumber Yards, use scrap lumber for art.

Suggested Human Resources:

1. Resource people:
    - Clyde Phillips, Plumber
    - Don Nichols, Electrician
    - Bob Pitchford, Carpenter (Laura's father)
    - Rich Nichols, Masonry (Tony's father)

2. Field Trip - Lumber Yard in Farmer City
   Industrial Arts Class at High School

3. Invite a construction worker to speak.
   Ask: Describe a typical day on the job.
   Discuss various safety measures.
   (explain hard hat, gloves, safety glasses)

4. Invite an industrial arts teacher to speak.
   Demonstrate the use of a hammer and saw.
   Students can pound and saw wood.

5. Visit the industrial arts center.

Suggested Material Resources:

1. What Happens When You Build a House, by Arthus Shay
   Very good pictures. Teacher would have to paraphrase.

2. The True Book of Tools for Building, by Jerome Leavitt.
   Has good pictures of all the tools used by a carpenter.

3. Whose Tools Are These: by Edward and Ruth Radlauer.
   Very good pictures of tools used by a carpenter.

4. Squarer Are Not Bad! by Violet Salozar
   Discuss why people feel fearful of strangers. How do you feel when a stranger comes near you? Talks to you?
   Art - Using pre-cut shapes, paste them together to make designs or pictures.

5. Katy - No-Pocket by Emmy Payne
   Using a pocket apron used by a carpenter, (make your own if not available) put tools in the proper spot.
   Using word cards for the tools, match card with tool, card with pocket.

6. What It Feels Like To Be A Building by Forrest Wilson
   Act out some of the "buildings"
    - Squeeze
    - Squash
    - Bend, etc.

   What are some other situations where you feel these words.
    - squeeze - in an elevator

7. Rhyme Time: Can you think of a rhyme.
   Would you believe a duck who drives a truck?

Suggested Material Resources:

1. Career Pictures - Business and Office - M.S. Library
    - Secretary
    - Bank Teller
    - Computer Programmer
    - Real Estate Broker
    - Insurance Agent
    - Executive
    - Office File Clerk
    - Personnel Counselor
    - Accounting Clerk
    - Receptionist

2. Study Print - When You Grow Up - Business and Office Mini Productions - part of a series of study prints
    M.S. Library

3. Self Development Dimension Guide - Green - M.S. Library

4. An Analysis of Fifteen Occupational Clusters Identified by the U.S. Office of Education - M.S. Library

5. Career Awareness Filmstrip Set
    - a. I Have A Body - includes construction job pictures
    - b. I Have A Brain - Machines are used by people
        Bank Teller, Secretary
    - c. The Work People Do - Draftsman - designer
        Accountant
        Librarian
        Secretary
    - d. I Can Make Choices - About money
        About clothes
        About what I will be
    - e. I Can Do Things - Carpenter
        Tailor
        Construction
        Entertainment

6. Career Pictures - Construction - Includes pictures:
    - Carpenter
    - Carpentry Teacher
    - Civil Engineer
    - Electrician
    - Grader Driver
    - Power Driver
    - Plumber
    - Roofer
    - Surveyor
    - Welder

7. Career Education:
    Peoria Public Schools
    District 150
    Peoria, Illinois

8. Life Style - Dimension Guide - Orange

9. Career Education Program - Volume I - K-6 - By Charles W. Ryan

10. DUSO D-1 American Guidance Service, Inc.

11. Science in Your Classroom - From: Grade Teacher

12. Coping Behaviors Dimension Guide - Yellow

13. American Trucking Association, Inc.
1616 P. Street, Northwest
Washington, D.C. 20036

Travel Fun with Trucks
Trucks and things you'll want to know about them

14. Story Starters - Ginn and Company - Library

15. Occupac Project - Phase II, Final Report

16. I Can Do
Now I am Ready - What About Me
Dimensions in Personality - Pflaum/Standard

17. Cronicle Guidance Publications, Inc.
Awareness Kit
Programmed Work - Workers We Know
Includes: Orientation of School
Truck Driver
Mail Carrier
Grocery Checker
Office Worker
Plumber
Painter
Carpenter

18. Posters for bulletin board in Library
fireman
teacher
newspaper boy
policeman
grocery man
doctor
mailman
farmer and machinery
circus and animals

19. Values Clarification - A Handbook of Practical Strategies for Teachers and Students by Sidney B. Simon, Leland W. Howe, Howard Kirschenbaum

20. The Arbuthnot - Anthology of Children's Literature

21. When You Grow Up (Posters)
    Includes: Communications and Media
              Construction
              Office Worker

22. Pictures in M. Library
    Moving Goods For People in the City

23. Western Publishing Company, Inc.
    School and Library Department
    850 Third Avenue
    New York, New York 10022

    Richard Scarry's
    Best Word Program Ever

24. Career Identity Cards DLM

25. Cathedral - The Story of Its Construction
    by David Macaulay

    Excellent pictures of tradesmen who built a cathedral. Good to initiate discussion about tools and materials.

FIRST EXPERIENCE LEVEL

Occupational Cluster: Manufacturing

Major Project: Assembly Line for Preservation of Food

Subject Matter: Language Arts, Mathematics, Science, Health, Social Studies, Music, Physical Education

Related Areas: Farmer, trucker, trains, warehouses, stores, cooking, canning, bakery, restaurants

Career Development Concepts:

Major Concept: Lifestyle
Work affects an individual's way of life in that a person is a social being, an economic being, a family being, a leisure being and a moral being

Subconcepts: Lifestyle
Family members perform work they are capable of performing, responsibilities are shared, and family is an interdependent unit

Subconcepts: Self-Developing
An individual experiences various roles - friend, student, group member.

Subconcepts: Coping behavior
An individual should learn to cope with the rights and feelings of others. Several skills may be required to perform a given task.

Subconcepts: Educational Awareness
Knowledge and skills in subject matter area are helpful in occupational competence. Learning is a lifelong process.

Subconcepts: Attitudes and Appreciations
Completion of a worth while task has value for the worker and for society. Work involves the acceptance of responsibility for a task.

Subconcepts: Career Information
Occupations have their own settings. Earnings vary with occupations.

Teacher's Main Goal:
To make pupils aware of careers involved in the Food Preservation Industry and the decision making, lifestyle, coping behavior, and self development concepts that they can understand at the first grade level.

Teacher's Goal: to help students:

1. Decide about the box, shape and size
2. Make boxes for packaging cereal.
3. Prepare Advertisements for selling the product.
4. Prepare the design for the boxes.
5. Put the boxes together.
6. Count the number of pieces to put in each box.
7. Weigh to make sure each box is the same.
8. Seal and Process for _____ minutes.
9. Selling product.

Plan II to help students:

1. Decide what size plastic containers.
2. Prepare advertisements.
3. Design for package or box.
4. Put packages together.
5. Clean pumpkin.
6. Cut and pit food.
7. Check for good and bad foods
8. Boil water
9. Blanch food for _____ minutes.
10. Cool and seal and package.
11. Put on market for selling.

Pupil Performance Objectives: Social Studies

1. Students will learn about interdependence.
2. Students will learn the reasons for different lifestyle.
3. Students will learn about production and labor.

4. Students will learn about earning income and its uses.

5. Students will learn about the wants and needs of people.

6. Students will learn about markets and food manufacturing.

7. Students will learn about different departments in a grocery store.

8. Students will learn about early families' ways of preserving food.

9. Students will locate some of the places their foods come from.

10. Students will learn about the beginning of the assembly lines.

Pupil Performance Objectives: Science

1. Students will become aware of the five senses.

2. Students will be able to see similarities and differences in foods.

3. Students will be able to categorize foods.

4. Students will observe and investigate.

5. Students will be able to see the necessity for cleanliness.

6. Students will decide what ingredients are needed for the selected recipes.

7. Students will learn about the preservation of foods.

Pupil Performance Objectives: Language Arts

1. Students will be able to be good listeners.

2. Students will be able to make an experience chart.

3. Students will be able to tell stories.

4. Students will be able to follow directions.

5. Students will learn to interview in the simplest terms.

6. Students will work together in creative dramatics.

7. Students will begin to develop awarenesses in Manufacturing.

8. Students will be able to describe some ways of preserving food.

9. Students will be able to "label" foods correctly.

Pupil Performance Objectives: Mathematics

1. Students will be able to measure height, length, width in English and Metric.

2. Students will be able to count objects by 2's, 5's, 10's.

3. Students will be able to compare sets in foods and packages.

4. Students will be able to use basic addition and subtraction facts.

5. Students will be able to tell hour and half hour on the clock.

6. Students will be able to count money when selling products.

7. Students will be able to make and use graphs in jobs.

8. Students will be able to measure fractions - 1/2, 1/3, 1/4.

9. Students will be able to distinguish some geometric figures in the food processing business.

10. Students will be able to measure ingredients correctly.

11. Students will be able to count the number of people working on different projects.

Pupil Performance Objectives: Physical Education

1. Students will be able to do exercises to see how relaxing it would be for the assembly line worker who is in one position for a long time.

Pupil Performance Objectives: Music

1. Students will be able to listen to different types of music.

2. Students will be able to move in rhythm to music.

Suggested Activities: Language Arts

1. Match-ups. Match picture of food item with word or letter sound.

2. Words that Rhyme. For blackboard work as a group to compose a simple four line verse about foods; such as: Milk on my cereal, Milk in my cup, Milk, butter and cheese, We'll eat them all up!

3. Make Stone Soup after reading the story.

4. Talking food puppets - Larry Lemon, Albert Apple, Orville Orange, Billy Bean, Carrie Cabbage, etc.

5. Experience charts of different types.

6. Tape stories to listen to and answer questions with yes or no on ditto.

7. Rhyming words with food such as mustard-custard, steak-cake.

8. Make up a skit about workers - at home and at work. About food growing - pretend you are a seed.

9. Make board list of what is in the home that come from an assembly line, T.V., bulbs, cars, radio, packaged foods.

10. Talk about the sights and sounds at a factory.

11. Talk about the feelings of the worker on his job and then at home.

12. Categorize indoor-outdoor jobs that have to do with foods.

13. Make bulletin board displays of people who in some way work with food.
    a. Which ones work with hands.
    b. Which ones do paper work.
    c. Which ones work with living things.
    d. Which ones work with machines.
    e. Which ones can be creative
    f. Which ones are required to follow specific rules

14. Write a letter inviting Human Resources to be interviewed.

15. Write foods we eat. Game

Suggested Activities: Math

1. Super Market Add. A player shakes the jar lid (with 3 pictures of food, numbered 1,2,3 and 3 beans) vigorously and then quickly lays it on the table or any flat surface. If any of the beans land inside any numbered sections, the player adds that number to his score. The first player to reach 15 points wins the game.

2. Number equivalence cards-This pertains to the relationship of addition and subtraction, and the joining and separation of sets and sub-sets (activity already made).

3. Use seeds to discover subsets.

4. Food dominos - Game - sets and sub-sets.

Suggested Activities: Social Studies

1. Have assembly line for freezing food-pumpkin.

2. Have assembly line for packaging cereal.

3. Make cookies, lemonade, finger jello, corn bread, instant pudding, ice cream, candy, bake bread.

4. Bring raisins to school and talk about everyone who helped get them to the store.

5. Investigate the history of getting and preserving foods. Dried, smoked, canned, pickled, frozen, dry frozen, irradiation, in tubes, capsules, or kept in cool dry places for the winter.

6. Make booklets from planting the seeds to buying the food at the store.

7. Open-end story about a certain food.

8. Make a city map-find where parents live and where their jobs are.

9. Discuss labor unions, in simple form and have a skit pertaining to home-parents are management and children are the labor.

10. Plant different seeds

11. Find out where different foods that they especially like come from in the world.

12. Setting the table correctly.

13. Cooking food properly-different types of cooking.

Suggested Activities: Science and Health

1. Make a good meal from the 4 food families (from magazine pictures).

2. Have a "Tasting Party"-sweet, sour, spicy, dry, moist, smooth, rough (oily).

3. Make ditto paper with picture of a fruit, vegetable, meat, milk, bread group, then put words or pictures in the right ditto.

4. Why do we eat the foods we do? Food groups, vitamins, minerals, etc.

5. Observe different types of mold.

6. Save some pumpkin seeds to plant later.

7. Bake and salt some pumpkin seeds to eat.

8. Identify plastic food-Game

9. Yummy party-bring one food that you like to school. If students like it, it's "yummy", if they don't like it it's "yuccy".

10. How Does It Taste? Game-"Learning About Nature Through Games" V. Musselman. Nature Name Games p.43-46.

Suggested Actuvities: Art

1. Make sanitary caps from newspapers to wear over head and hair.

2. Make papermache or clay foods and paint.

3. Potato printing.

4. Design and make labels on empty cans.

5. Make placemats to use on the table.

Suggested Activities: Music

1. Learn to sing songs about food.

2. Learn what type of background music for meal.

3. What sounds could you make with the orff instruments that might be heard in a factory? Is there rhythm in factory work that we might examine?

Suggested Activities: Physical Education

1. Make your body into the shape of different foods; orange, bananas.

2. Several children may be involved in activities 2 and 3 such as the wind, rain, wheat, sun. Pretend you are a stalk of wheat and move from side to side in the wind. Stand up straight when the sun shines on you. Bend your head when it's raining. If the hail comes and hits you, it will knock you down. You will lie there for sometime! Soon the sun will shine again and you will slowly, slowly, straighten up until you are nice and tall again.

Pretend that you are a little cucumber seed and you are being planted in the soil. You lie there nice and warm in the earth. Soon you begin to change when the sun shines upon your bed, and the rain softens your "coat". You begin to reach toward the light. My we can see your little green head slowly peeking through the soil. Are you happy to be out in the light now? The breeze is gently blowing and you're nodding your head back and forth, then up and down. You grow very slowly for many days now all of a sudden I see your "vines" reaching out to stretch awhile. You reach out and out and out. Finally you are fully grown and have 3 cucumbers on your "vines". Now your work is ended.

Discussion Questions:

1. What are the different careers in the manufacturing area?
2. What kinds of training are there in the Food Preservation Career?
3. What skills do you need in this area?
4. What do you think you might like about this work? What might you dislike?
5. What kind of environment might these people live in?
6. Can you tell what job a "canner" does in the factory? a packager, etc.
7. Would people in the factory work together?
8. Do these people in the factory make a lot of money? Do they live well?
9. Is this job easy? Is it hard work? Is it dangerous?

Bakery Area-Workers:

1. Production worker-watch the machine, these men load and unload, inspect results.
2. Mixers
3. Dividermen
4. Dough-molder's
5. Bench hands
6. Oven men
7. All around bakers-in small bakeries
8. Slicing and wrapping machine operators.

9. Icing Mixers

10. Hand Icers

Maintenance Occupations:

1. Sales and Driving Occupations

2. Administrative, clerical, and professional and technical occupations.

Canning Workers:

1. Seasonal workers to harvest crops

2. Delivery workers

3. Printers for labels

4. Workers in frozen food industry

5. Distributors

Kinds of Companies:

1. Cereal Grains-Cereal, Flour, Snack Foods

2. Meat and Poultry-Canned Hams, Dehydrated Eggs, Prepared Dinners

3. Fats and Oils-Shortening, Margarine

4. Fish and Seafood-Fresh, Frozen, Pre-cooked

5. Bakery and Confectionary-Bread, Pie, Candies

6. Fruits, Vegetables-Jams, Jellies, Canned and Frozen Fruits and Vegetables.

7. Dairy Products-Milk, Cheese, Butter, Frozen Desserts, Yogurt.

Flavors:

1. Sugars and Starches

2. Stabilizers and Emulsifiers

3. Preservatives and Colors

4. Nutritional Additives

Occupac Kit:

jars
lids
plastic bag
boxes
strainer
funnel
spoons
scraper
measuring cups
measuring spoons
pans-lids
"canner"
apron
hot pad gloves
tongs
silverware

candy thermometer
meat thermometer
canning and freezing cook book
napkins
plastic foods
recipe books
paper plates
napkin
cup
glass
placemats

Human Resources:

Farmer
Machinery Dealer-Mr. Dunn
Meat Packer-Mr. Schumacher
Truck Driver
Elevator-Mr. West
Grocery Manager-Mr. Richards
Mother-about shopping
Mother-to instruct about freezing and canning food

Field Trips:

Grocery Store
Elevator
Canning factory at Eureka, Gibson City
Beich Candy Factory at Bloomington
Twist Egg Enterprise, Weldon
Bakery in Champaign
Farmer City Packers

Material Resources:

Filmstrips: Farmer City Library
- Johnny Appleseed
- A Loaf of Bread
- The Milk We Drink
- Finding Out How Foods are Used in Your Body
- The Story of Bread
- The Story of Fruits and Vegetables
- Foods for Health
- Central Farming Region-Food for the Nation
- The Story of Milk
- The Story of Meat
- Learning About Food

Study Pring Pictures
- Common Fruits
- Supermarket Helpers

Filmstrips: Mansfield Library
- Man's Struggle to Preserve Food
- The Foods We Eat
- Supplying Foods For Our Cities
- Foods Comes From Many Places
- Job Opportunities in a Restaurant

Cassette
- SVE Educational Filmstrips with cassette
- Singer-Job Opportunities Now-Group I-In A Super Market A612SAR

Books: Mansfield Library
- D. Stiver: At the Wholesale Product Market
- H. Hefferman: Food From Near and Far
- M. Banks: How Foods Are Preserved
- D. Whitney: Let's Find Out About Milk
- M. Selsom: More Potatoes
- H. Zemach: Nail Soup-Swedish Folk Tale
- G. Sullivan: Plants to Grow Indoors

Films: (to order) Association-Sterling Films
1. The Miracle of Apples
2. Uncle Jim's Dairy Farm
3. Kids and Cookies
4. What's Good to Eat

Films: Modern Talking Picture Service
1. Home, Sweet Home Style (archway)
2. Fresh Country Apples

Books: Farmer City Library
- D. Levenson: The Day Joe Went to the Supermarket
- J. Jackson: Who Will Milk My Cow?
- M & J Carafoli: Look Who's Cooking
- I. Pedendorf: Food Is For Eating

Teacher Reference:
- Learning About Nature Through Crafts-Chapt. 4- Origin of Foods
- Learning About Nature Through Games-Capt.4-5, Virginia Musselman

Poems:
- Song for Supper by J. Lilian Vandevere
- The Ice Cream Man by Rachel Field
- The Gingerbread Man by Rowena Bennett
- Poems for Working People by Carl Sandburg

Music In Our Town: Silver Burdett-Grade 2
- Breakfast
- Making Cookies
- Who Can It Be?
- You Turn for Surgar and Tea
- Strawberry Jam
- Farmer's Market
- Watermelons
- We'll All Go Singing
- Popsicle Song
- Growning Crops
- Planting Cabbage
- Wind in the Corn
- Shake the Apple Tree
- I Had a Little Nut Tree

Harvest
Market Day
Ally Galoo, Galoo

Silver Burdett Music:
The Critter Got Away

Our First Music: Birchard Co.
Good Gingerbread
Pancakes
Cookies
At the Grocery Shop
The Bakery Shop
Candy Shop
Ice Cream Soda
Milk
The Song of the Corn
Rice
Oats and Beans

Music Through The Day: Silver Burdett
The Pawpaw Patch
Boil The Cabbage Down
Mix the Pancake
My Apple Tree
Do You Know?
It's A Pumpkin

Manufacturing Foods

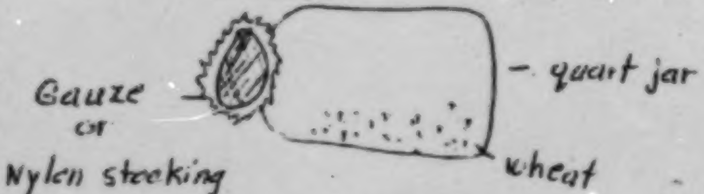
Science Activity

Seed Sprouting - Beans or Wheat

Bottle Method

Place 3/4 cup of clean washed wheat in a quart jar and cover with 3/4 cup warm water. Soak about 12 hours, drain off water (drink or use in cooking). Rinse the wheat drain, and put the bottle in a cupboard where it is dark - warm. Don't feel obligated to handle or interfere with germinating wheat. (Like a chicken hatching, it can take [illegible]re of itself). Gently sprinkle a little water over the grain 2 or 3 times a day (depending on temperature and humidity). There is no need for vigorous wishing and rinsing.

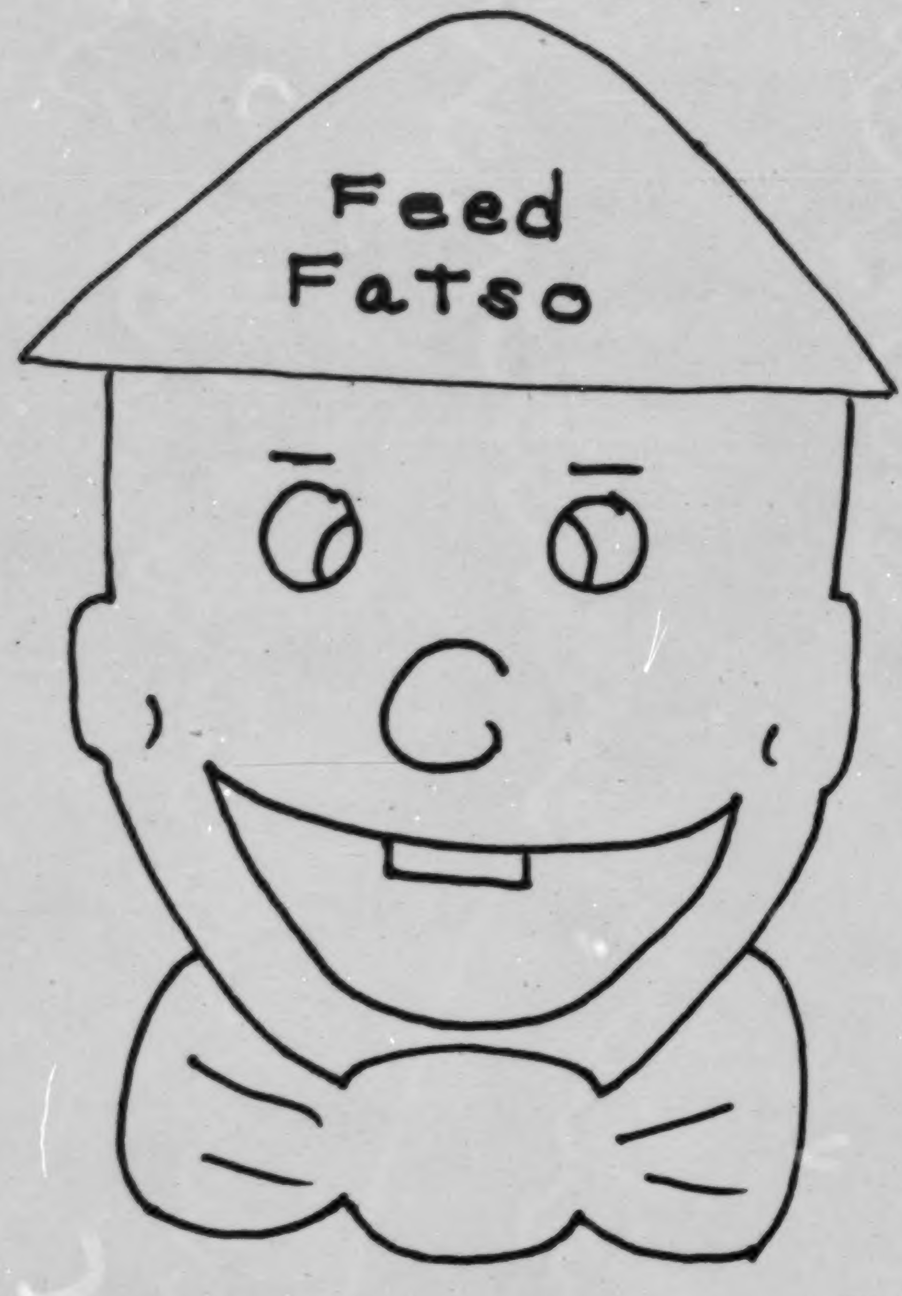
(Eat when sprout is about 1/4")



Shallow Dish Method

Cover the bottom of a shallow baking dish, with 1/4" of wheat which has been soaked as in the bottle method. Cover with a wet terry towel folded to fit the dish. Keep the towel wet, but don't let stand in water at any time.

Throw bean bags in mouth



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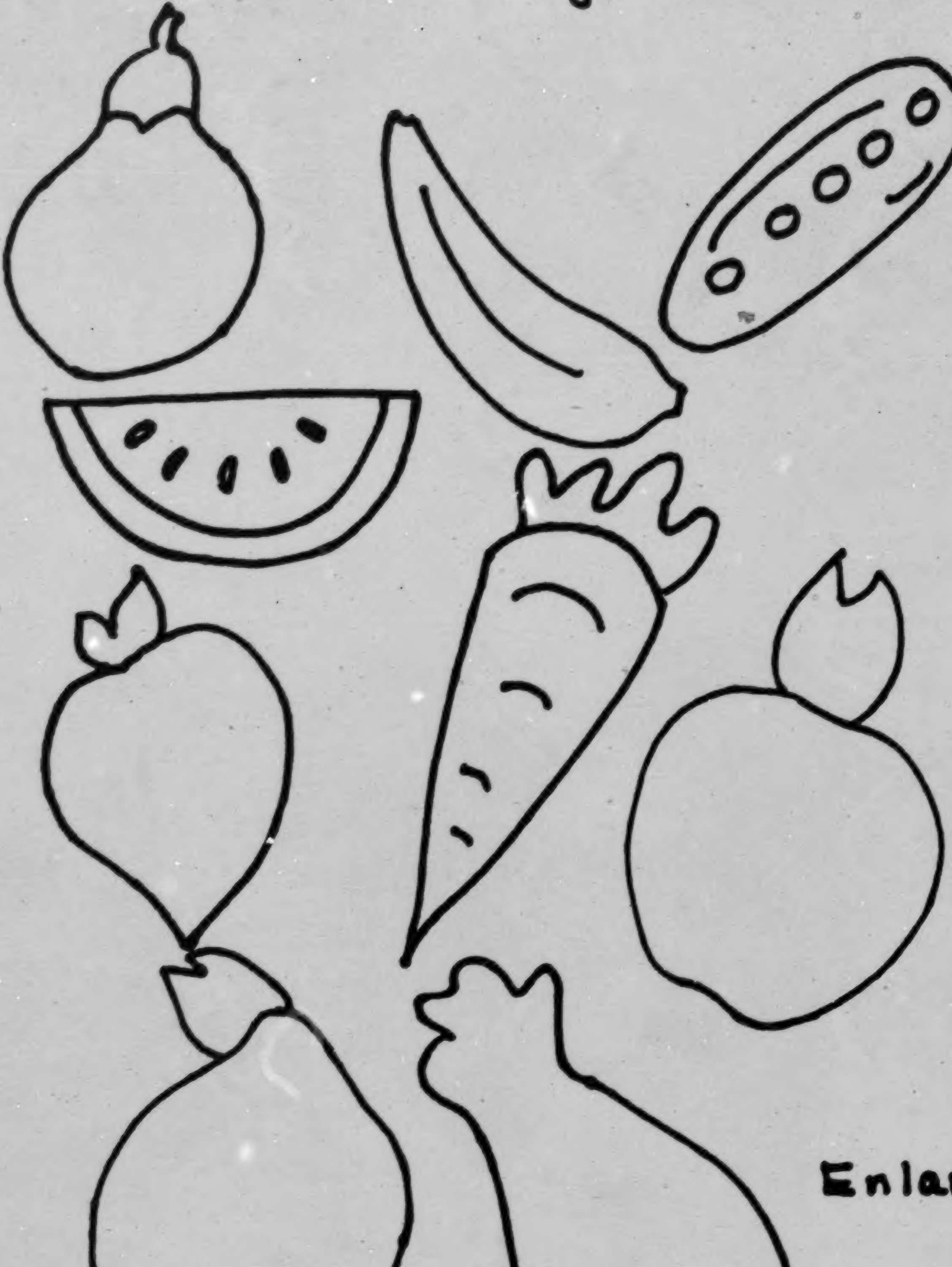
Bean Bag Patterns



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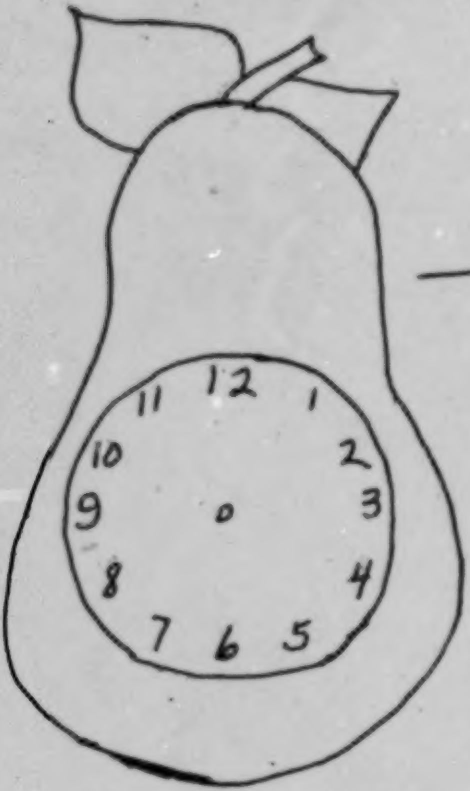
Telling Time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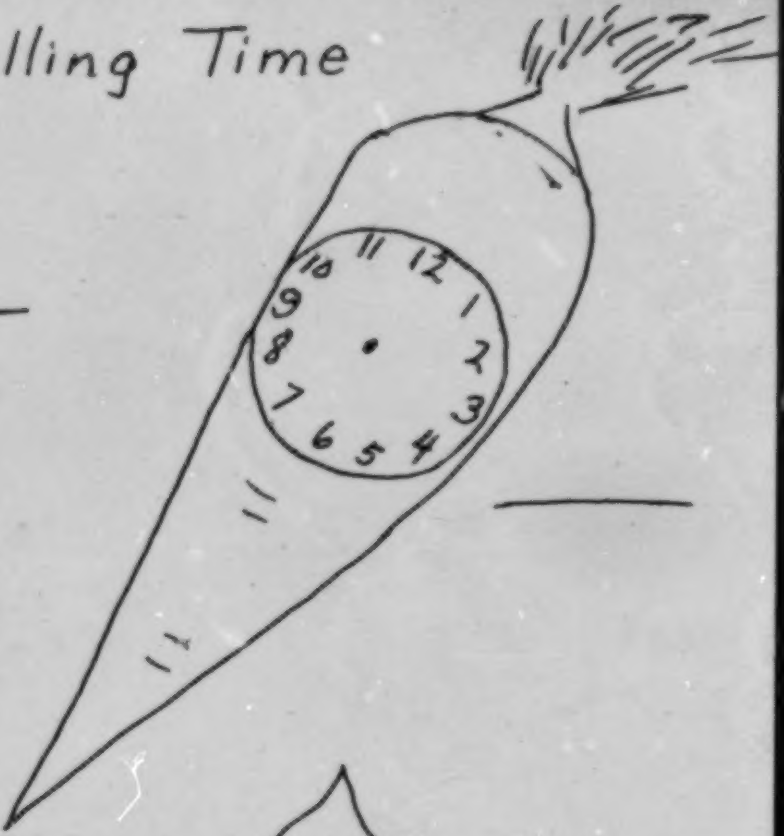
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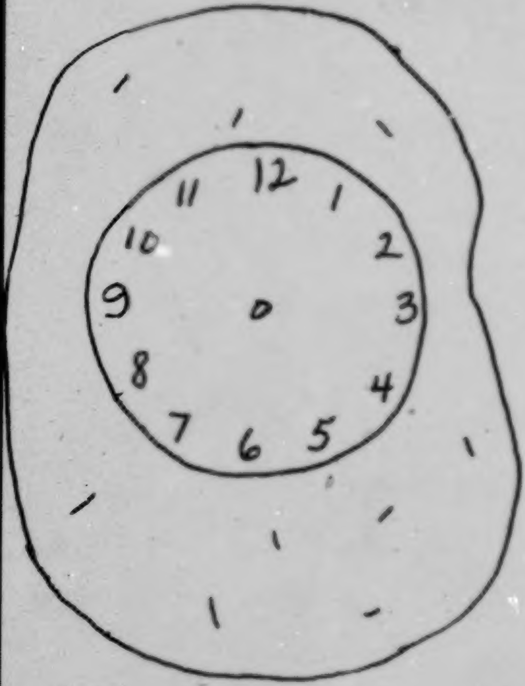
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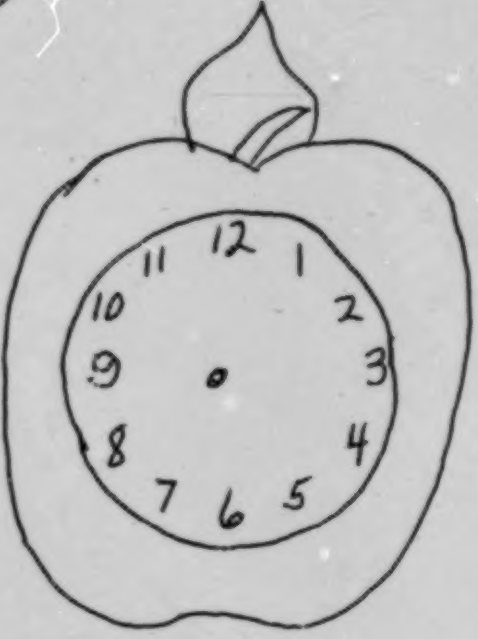
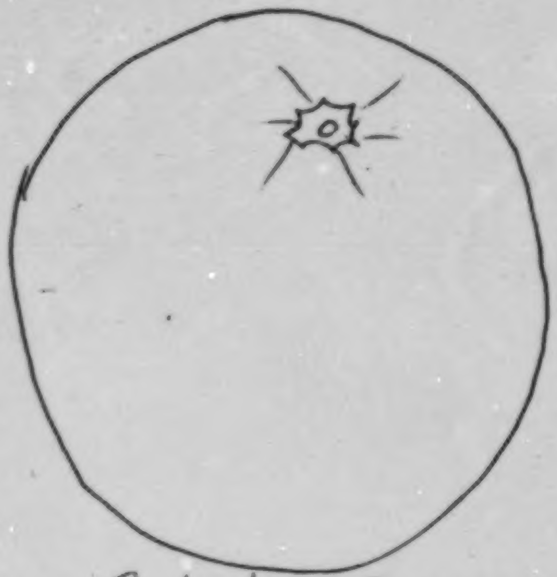
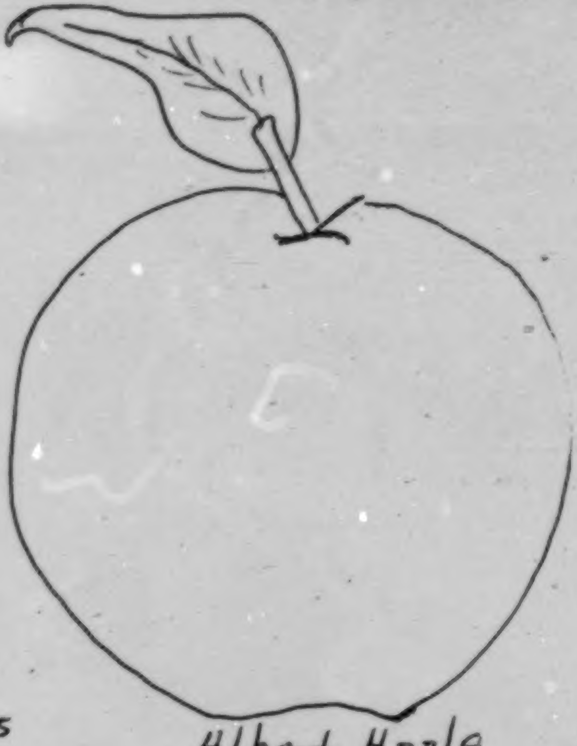
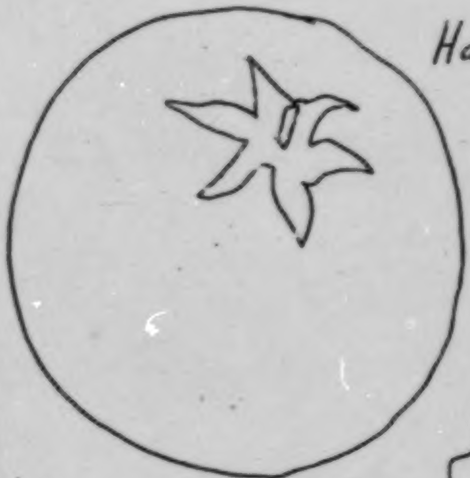
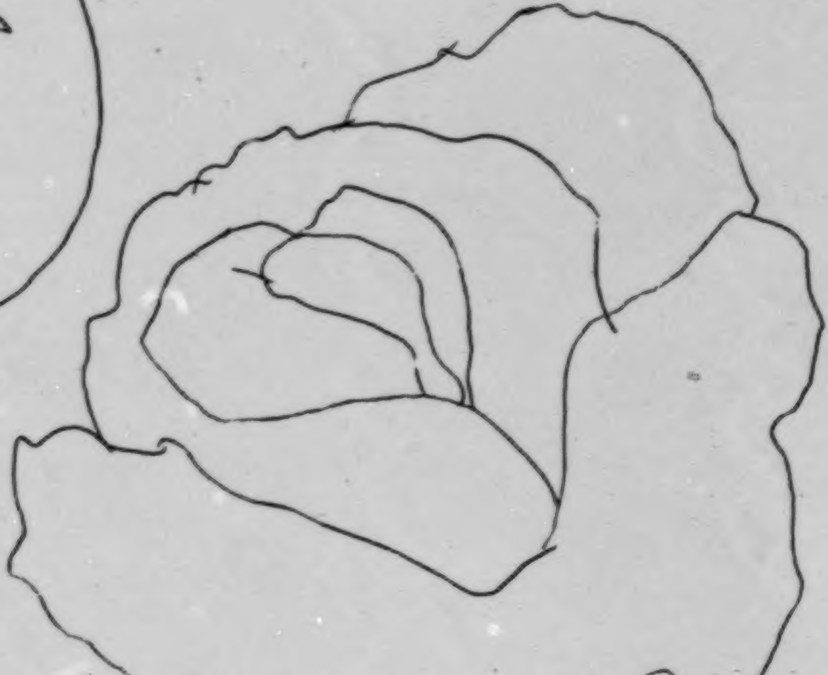

12 1 2 3 4 5 6 7 8 9 10 11

Hand Puppets

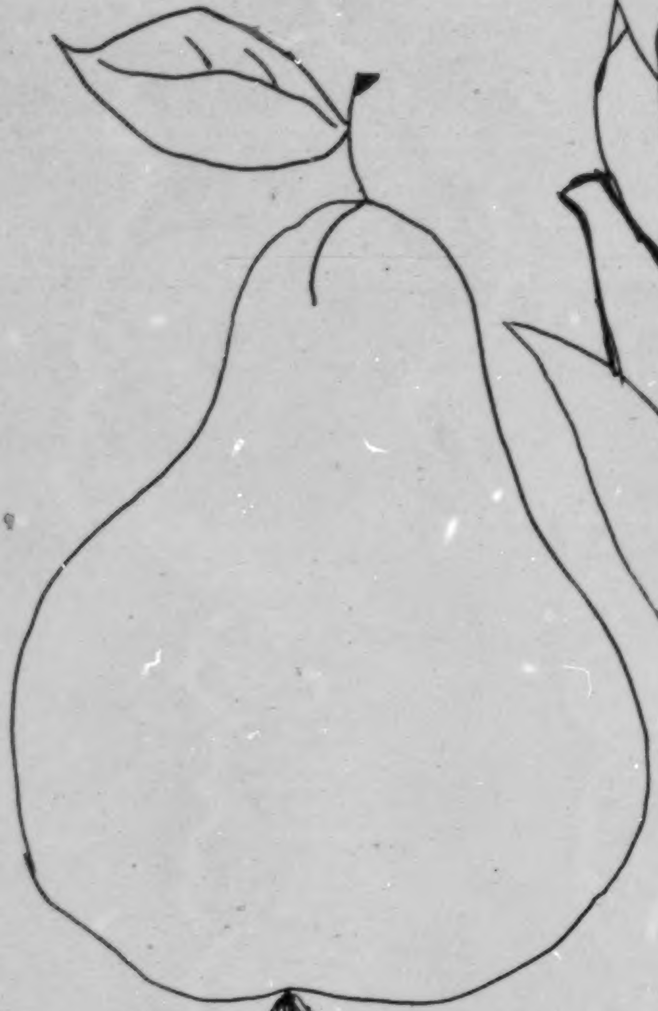

Ophelia Orange


Albert Apple

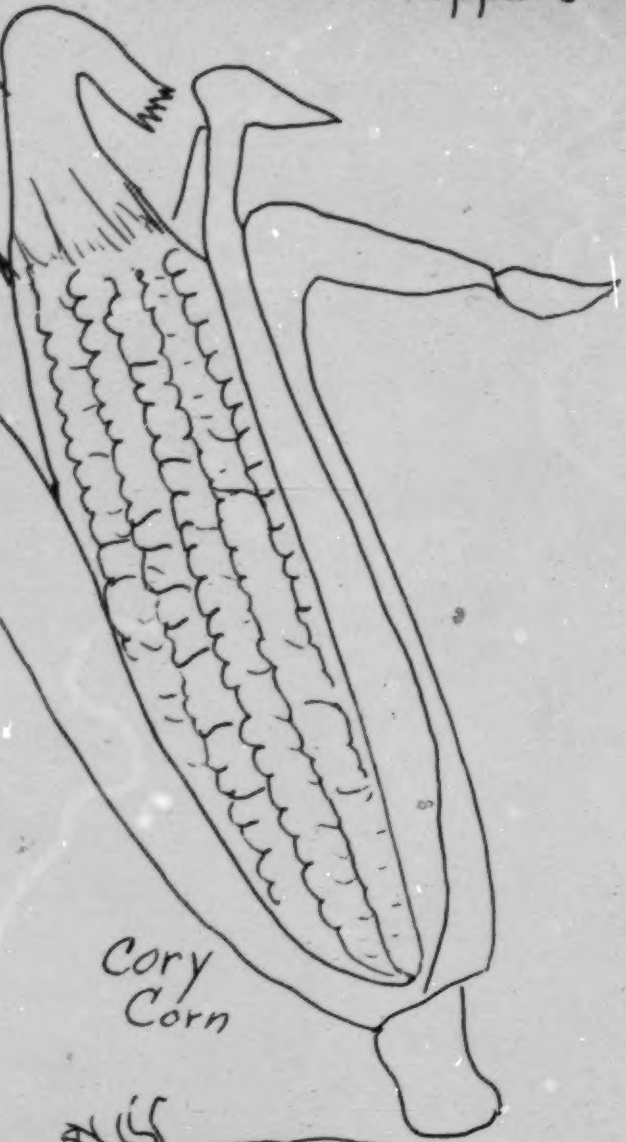

Tommy Tomato


Leslie Lettuce

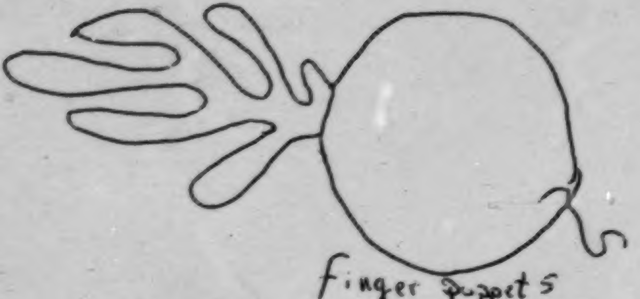
Hand Puppets



Prissy Pear

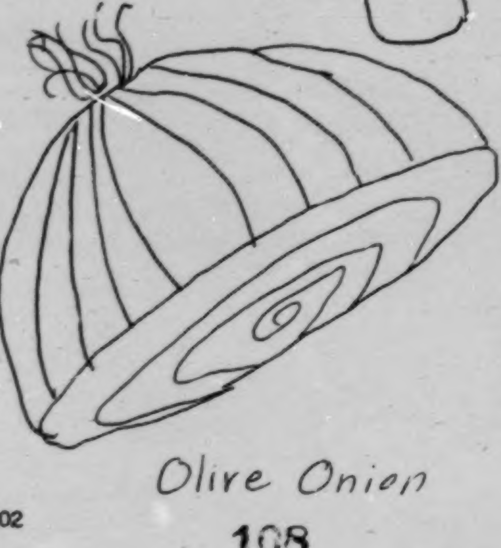


Cory Corn

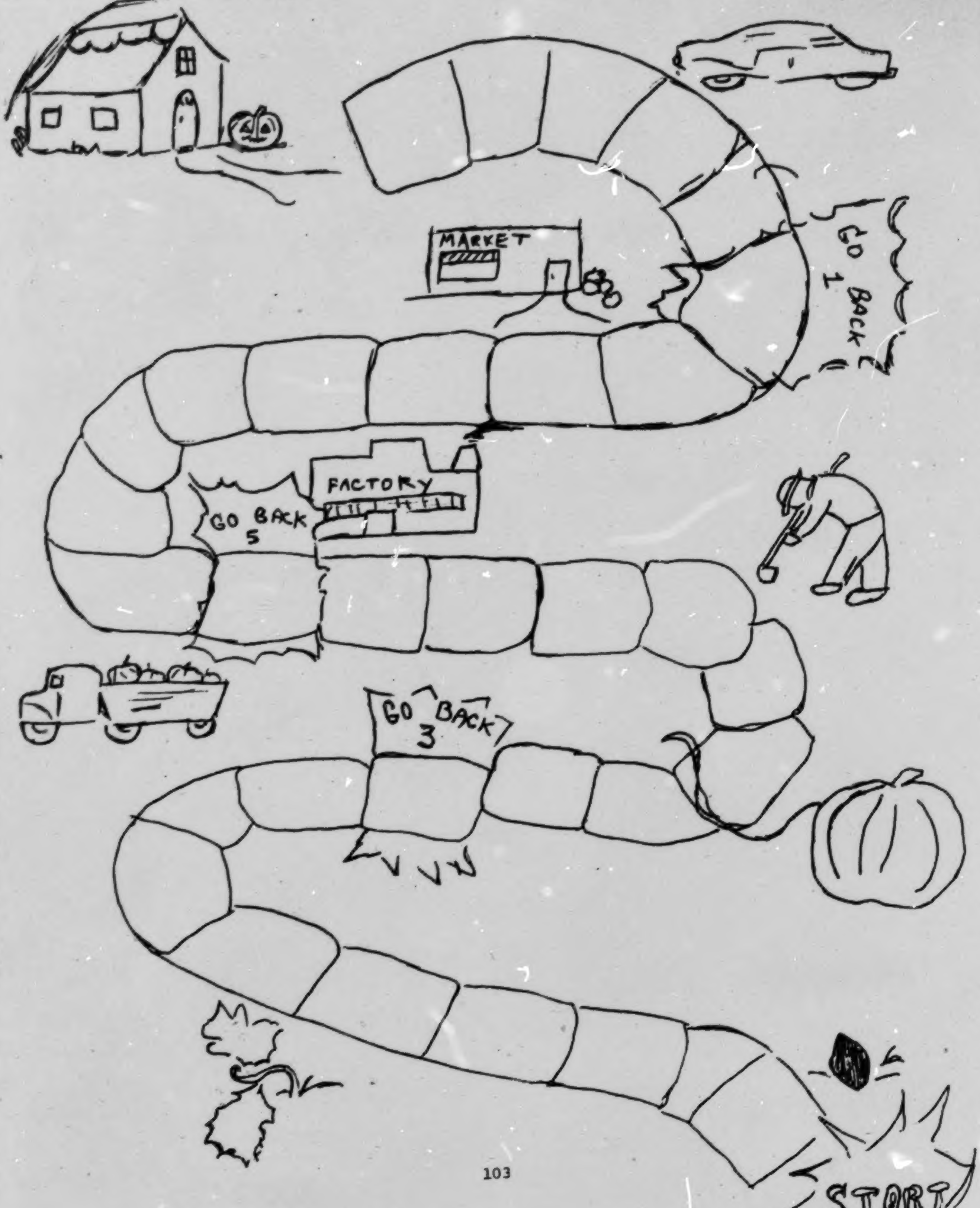


Finger puppets

Ruby Radish

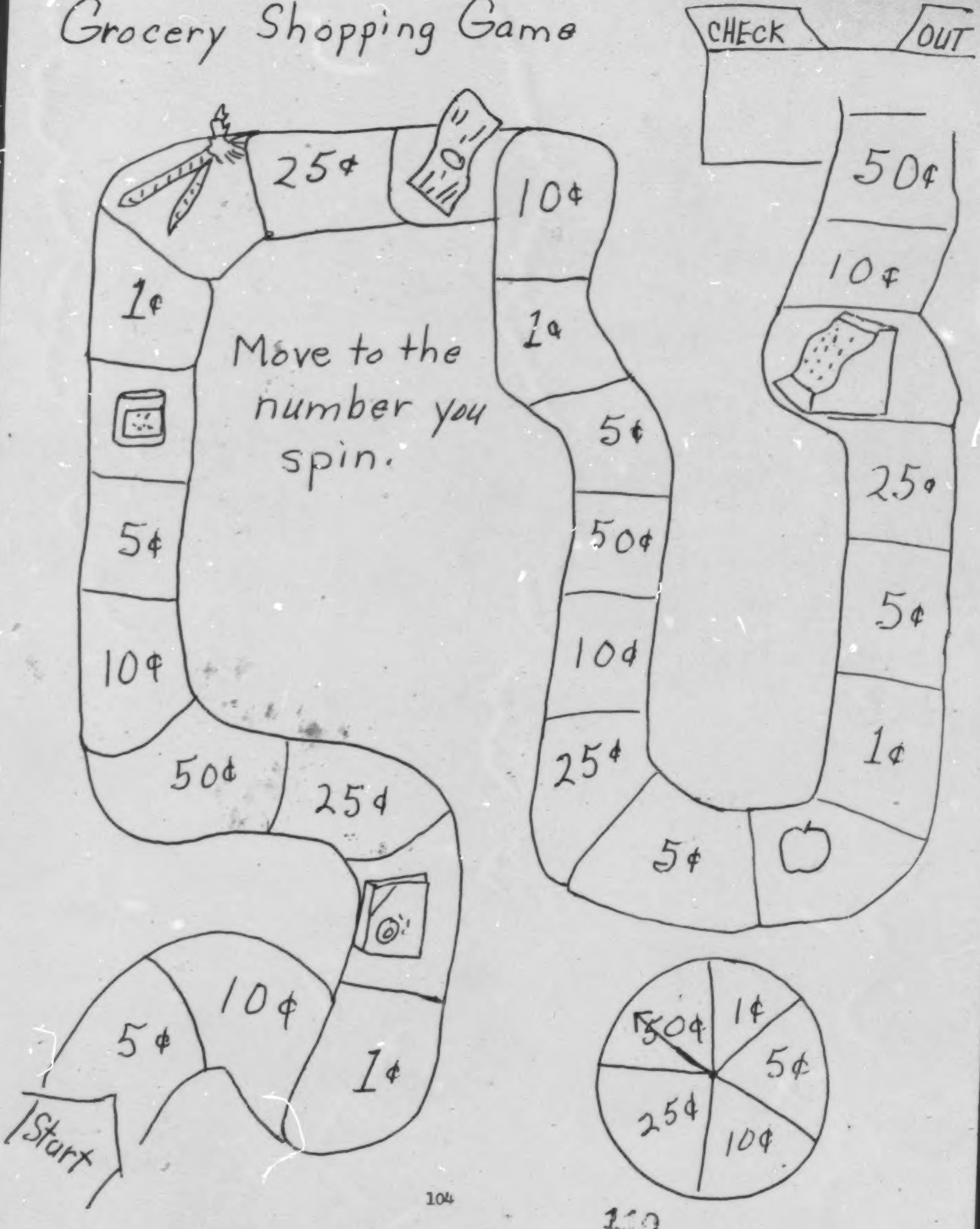


Olive Onion


MARKET
GO BACK 1
FACTORY
GO BACK 5
GO BACK 3
START

USE SPINNER

Grocery Shopping Game


CHECK OUT
Start
5¢
10¢
1¢
25¢
50¢
10¢
5¢
1¢
25¢
10¢
1¢
5¢
50¢
10¢
25¢
5¢
1¢
5¢
25¢
10¢
50¢
50¢
1¢
5¢
10¢
25¢

Move to the number you spin.

FIRST EXPERIENCE LEVEL

Occupational Cluster: Transportation Occupations

Major Project: Make a simple model of the railroad trains, tracks, signals, etc. using children as personnel.

Subject Matter: Language Arts, Mathematics, Science, Social Studies

Career Development Concepts:

Major Concept: Decision Making

Life involves a series of choices leading to career commitments.

Major Concept: Lifestyle

Work affects on individual's way of life, in that a person is a social being, an economic being, a family being, a leisure being, a moral being.

Subconcepts: Attitudes and Appreciations

Most occupations include common expectations, such as punctuality, dependability and avoidance of excessive absence. Work involves the acceptance of responsibility for a task.

Subconcepts: Career Information

Occupations may have certain dress requirements. Occupations require the use of specific materials and equipment. Occupations have their own vocabularies.

Subconcepts: Self-Developing

An individual experiences various role, friend, student group members, etc.

Subconcepts: Educational Awareness

An individual should learn to cope with the feelings and rights of others. Several skills may be required to perform a given task. Things change and these changes influence the choices and decisions one makes.

Teacher Goal:

To make pupils aware of the necessities of transportation and the interdependence of people and businesses on transportation. To have an awareness of the different careers involved, the values, personalities, coping behaviors involved.

Pupil Performance Objectives: Social Studies

1. Student will be able to tell about the different types of trains, and train cars.
2. Student will learn about being dependent upon others.

3. Student will be able to learn the history of railroads.

4. Student will learn about different lifestyles.

5. Student will learn about the wants and needs of people.

6. Student will learn about different departments in the railroads.

7. Student will be able to relate the duties, responsibilities and rewards of the train crew.

8. Student will do simple locating on maps.

9. Student will be able to know simple directions on the map.

10. Student will learn the meaning of values.

Pupil Performance Objectives: Science

1. Student will be able to tell how the train runs.

2. Student will be able to categorize.

3. Student will be able to describe similarities and differences.

4. Student will be able to observe and investigate.

5. Student will learn about safety measures taken.

6. Student will learn the use of special tools.

Pupil Performance Objectives: Language Arts

1. Students will be able to enact jobs on engineers, conductor, ticket agent, brakeman, etc.

2. Students will be able to tell a story in sequences about their trip.

3. Students will be able to visually discriminate between railroad cars.

4. Students will be able to use simple descriptive words.

5. Students will be able to role play about train people.

6. Students will be able to follow directions (signals).

7. Students will be able to finish open-end stories.

8. Students will be able to make a picture dictionary on train cars and put them in the right order.

9. Students will have vocabulary lists.

10. Students will be able to interview a human resource.

Pupil Performance Objectives: Mathematics

1. Students will be able to compare sets.

2. Students will count to 20.

3. Students will be able to tell number stories.

4. Students will learn about geometric figures.

5. Students will be able to tell time.

6. Students will be able to solve problems.

7. Students will be counting by 2's.

8. Students will be using ordinal numbers.

9. Students will be able to count money.

Suggested Activities:

1. Make a map of the United States and put the major railroads on it.

2. Make a vocabulary booklet on trains.

3. Make a booklet on trains-different cars, persons, in ABC order.

4. Roleplay the scene at the railway station.

5. Learn to use train language.

6. Make a collage of train pictures.

7. Make riddles with railroad words.

8. Make train cars from frozen orange juice cans, boxes and milk cartons.

9. Imitate different sounds that train workers hear.

10. Compare clothes and tools of railroad workers with other occupations.

11. Discuss safety measures.

Discussion Questions:

1. Discuss why working together is so important.

2. Why are there fewer workers on trains now than several years ago?

3. Discuss the different operators on the train and what they do.

4. Tell how the work of the train crew affects their lives and that of their family.

5. Make a list of railroad words and why they are needed to make the trains run smoothly.

6. Discuss the importance of trains to us.

7. Would your family like for you to have a job on the train or not?

8. Why were railroads first built?

Railroad Terms:

1. Back Shop
2. Bad order
3. Bend the Iron
4. Captain
5. Car Knocker
6. Clock
7. Cripple
8. Crummy
9. Deadhead
10. Drag
11. Drop
12. Frog
13. Fuses
14. Gandy Dancers
15. Goat
16. Green Eyes
17. Highball
18. High Iron
19. Hog
20. Hotshot
21. In the color
22. Main Line
23. Jack
24. Manifest
25. Matching Dials
26. Paddle
27. Piggy-back Train
28. Red Ball
29. Red Board
30. Reefer
31. Shoofly
32. Timetable
33. Wiping the guage
34. Wye

Railroad Vocabulary:

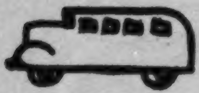
1. Switch
2. Siding
3. Cut
4. Shove
5. Coupling
6. Gondola
7. Tanker
8. Hopper
9. Flat car
10. Engine
11. Caboose
12. Cupola
13. Setout
14. Lading
15. Yard
16. Reefer
17. Airbrake hose
18. Whistle signals
19. Domecoach
20. Sleeping car
21. Passenger coaches
22. Diner
23. Cab
24. Engineer
25. Assistant engineer
26. Brakeman
27. Conductor
28. Porter
29. Fireman
30. Mail-baggage car
31. Refrigerator car
32. Stock car

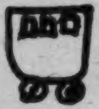
Occupac: Train

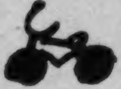
1. "Automatic" block signals
2. Fixed Signals-like highway markers
3. Whistle-for signals
4. Train signals-lights
5. Hand, Flag, Lamp-signals
6. Uniform
7. Train model
8. Track
9. Train station

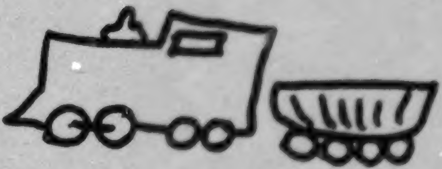
Transportation Activity: Math

1. Use flannel-board cut-outs as Visual Aids for number concepts.
2. How many wheels?









Suggested Human Resources:

1. Merle Zimmerman-worker
2. Dottie Shaffer-as a passenger

Field Trip:

1. Train Station
2. Monticello Museum (have to pay)

Material Resources:

Books: Farmer City Library

1. S. Johnson: About the Engineer of a Train
2. Careers with a Railroad
3. L. Slobodkin: Clear the Track
4. C. Woolley: I Like Trains
5. C. Greene: I Want to be a Train Engineer
6. L. Lenski: Little Train
7. E. Meeks: One is the Engine
8. C. Greene: Railroad Engineers and Airplane Pilots
9. C. Verleyan: Riding the Rails
10. G. Zaffo: The Big Book of Real Trains
11. C. Verleyen: The First Train
12. C. Crampton: Tootle
13. J. Barr: Train Stories

Filmstrips:

John Henry and His Mighty Hammer
Land Transportation, Railroad Freight
Railroads at work
How Wheels Help Us

Record:

Little Toot

Books: Mansfield Library

J. Behrens: Train Cargo

Careers with a Railroad

E. Meeks: One is the Engine

Folder:

Career Pictures-Transportation-Xerox Corp.

Cassette and Filmstrip:

Work World of Wheels-Children Press

Music:

Casey Jones
Wabash Cannonball
John Henry
Little Red Caboose
I've Been Working on the Railroad
(See Music Teacher)

FIRST EXPERIENCE LEVEL

Occupational Cluster: Agri-Business and Natural Resources

Major Project: Hatching Eggs

Subject Matter: Mathematics, Language Arts, Social Studies, Science

Career Development Concepts:

Major Concepts: Coping behavior
Individuals can learn to perform adequately in a variety of occupations and occupational environments.

Major Concepts: Self-Developing
Individuals differ in their interest, aptitudes, values and achievements.

Major Concepts: Attitudes and Appreciations
Society is dependent upon the productive work of individuals.

Subconcepts: Coping behavior
Several skills may be required to perform a given task.

Subconcepts: Decision Making
Problems which conflict with ones goals can be identified and assessed.

Subconcepts: Educational Awareness
Learning is a life long process. Learning achievement depends upon effort and ability.

Subconcepts: Attitudes and Appreciations
Completion of a worthwhile task has value for the worker and for society. Work involves the acceptance of responsibility for a task.

Teacher Goal:
To make pupils aware of living things of a lower level that need society's help to live and thrive.

Pupil Performance Objectives: Language Arts

1. Pupils will be able to express themselves freely.
2. Pupils will be able to remember details.
3. Pupils will be able to write simple stories.
4. Pupils will be able to use descriptive words.
5. Pupils will be able to recall sequence.
6. Pupils will be able to follow directions.
7. Pupils will be able to classify.

Pupil Performance Objectives: Mathematics

1. Pupils will use calendar properly.
2. Pupils will count to 50.
3. Pupils will be able to compare sets.
4. Pupils will use number sentences and stories.
5. Pupils will be able to locate positions.
6. Pupils will be able to group by tens.

Pupil Performance Objectives: Science

1. Pupils will be able to observe.
2. Pupils will be able to categorize.
3. Pupils will learn about cleanliness.
4. Pupils will learn about saving our wildlife.

Pupil Performance Objectives: Social Studies

1. Pupils will learn to work together.
2. Pupils will learn to be considerate of the wildlife and how they can help.
3. Pupils will learn about George Washington Carver and J. Brownlee Davidson.
4. Pupils will learn about different lifestyles.

Major Activity: Hatching Eggs

1. Discuss where to get the eggs and how to care for them.
2. Get an incubator. Make sure that it's clean.
3. Get the temperature under control before putting the eggs in.
4. Put a pan of water below eggs for humidity.
5. Mark an X on one side of eggs and 0 on the opposite side.
6. Don't let them get chilled!
7. Put them in the incubator.
8. Turn them 4 times a day for ____ days (depending on chicken, duck or goose eggs)

9. Observe, by candling, the progress in growth.

10. The last week, cash with damp warm cloth when turning them.

11. They may need to be "helped" out of the shell very slowly.

12. Then put them in a little brooder house (box with a light over it).

13. They will also need water and cracked corn after the second day.

14. Watch the soft down turn into feathers.

15. Observe how long this takes.

16. Make sure "it" has a good home when it leaves the classroom.

Additional Activities:

1. Go to the woods and observe what is going on.

2. Make a list of where wild animals live.

3. Draw pictures and make a booklet about some of these animals.

4. Find out what kinds of fish are in hatcheries to stock ponds, streams, etc.

5. Classify wildlife under fish, animals, plants.

6. Observe the wildlife in the different seasons.

Additional Activities:

Animals that Work-Game

Some Animals remind us of certain occupations. Can you match the following animals to list of occupations?

1.	dog	announcer
2.	ground hog	messenger
3.	parrott	watchman
4.	pigeon	weaver
5.	spider	weatherman
6.	magpie	baby sitter
7.	seal	pick pocket
8.	kangaroo	dam builder
9.	beaver	circus juggler

--from the Children's Friend Magazine

Additional Activities:

Riddles:

1. Why should spiders make good outfielders? (They catch flies).

2. What happens when it rains nickels, dimes and pennies? (There's some change in the weather).

3. What am I?
Sometimes I'm sweet, Sometimes I'm not.
Sometimes I'm cold. Sometimes I'm hot.
I had eyes, though I can't see.
Most everyone is fond of me. (potatoes).

From: Children's Friend

Animal Language-Game:

1. If you know all the answers, you're "wise as an owl."

2. Something very funny is "funny as a barrel of monkeys".

3. To cause someone to be angry is to "get his goat".

4. When it rains hard, it's "raining cats and dogs."

5. A hindrance is "a fly in the ointment."

6. Someone very proud is "on his high horse."

7. When you reveal a secret you "let the cat out of the bag."

8. A busy worker is called an "eager beaver."

9. A man who overeats might "make a pig of himself."

10. When you're in trouble, you're "in the dog house."

11. We call a very small town a "one horse town."

12. Someone who is always clumsy is like "a bull in a china shop."

13. If you pretend to be sorry, you're shedding "crocodile tears."

From: The Children's Friend

Discussion Questions:

1. What sort of education do you need for this type job?

2. Why do some people enjoy working outdoors and others indoors?

3. Is it more pleasant if you enjoy your work?

4. What is a game warden responsible for? And some of the other workers in the occupation?

5. Is this occupation very valuable?

6. Does this job require being around others constantly?

7. What have men done to this country since the Indians first lived here? What has happened to our woods and animals and plants?

8. Would you like to be a ranger? Why? Why not?

9. Would you like to learn about fish and wildlife?

10. Do you like to have picnics, go camping, hunting andfishing in the country?

11. Do you really care about our natural resources? What can you do to help?

Human Resources:

Dr. Tom Monfort
Gene Elliott
Warren Wilson

Field Trip:

Veterinarian
Woods

Material Resources:

Filmstrips: For Agri-Business and Natural Resources
Farmer City Library

1. Animals to Know

2. Bird Bills and Feet

3. Birds and their Nests

4. Bird Studies

5. Classification-Different Kinds of Animals

6. Finding Out How Animals Live

7. Finding Out How Animals Life

8. Finding Living Things

9. Food for Living Things

10. How Animals Protect Themselves

11. How Life Continues

12. Land Birds of North America

13. Learning About Birds

14. Living Things Hard to See

15. Living Things Need Each Other

16. Some Strange Eyes of Animals

17. Some Water Animals

18. The Turtles

19. The Growing Up of a Monarch Butterfly

20. Where Animals Come From

21. Why Animals Need Food, Heat and Air

Books: For Agri-Businesses and Natural Resources-Mansfield Library

1. J. Kaufman: Bats in the Dark
2. D. Wood: Beavers
3. L. & A. Hornblow: Animals Do the Strangest Things
4. J. Feilen: Deer
5. L. Floethe: Fishing Around the World
6. L. Lionni: Fish is Fish
7. A. Cooke: Giraffes at Home
8. M. Selsam: Hidden Animals
9. G. Conklin: I Caught a Lizard
10. A Kirn: Let's Look At More Tracks
11. E. Meeks: Mammals
12. R. Buxton: Nature's Pin Cushion
13. R. Wilson: Outdoor Wonderland
14. A. Wong: Pond Life: Watching Animals Grow
15. B. Kohn: Raccoons
16. F. Phleger: Red Tag Comes Back
17. J. Feilen: Squirrels
18. L. Darling: Seals and Walrus
19. M. Selsom: See Through the Sea
20. O. Schisgall: That Remarkable Creature, The Snail
21. B. Freschet: The Ants Go Marching
22. K. Mizumura: The Emperor Penguins
23. M. Kurtz: The Secret World
24. C. Carrick: The Pond
25. I. Pondendorf: True Book of Animal Babies

26. E. Posell: True Book of Elephants
27. G. Darby: What Is A Fish
28. G. Darby: What Is A Frog
29. G. Darby: What Is A Turtle
30. A. Fisher: Where Does Everyone Go?
31. R. Gross: What Is That Alligator Saying?
32. J. Watson: Wonders of Nature

Studyprints:

Animal Babies McGraw Hill
Mammals

Books: Farmer City Library

1. M. Selsom: All Kinds of Babies and How They Grow
2. G. Blough: After the Sun Goes Down
3. G. Blough: Animalsand Their Young
4. L. Hornblower: Animals Do the Strangest Things
5. I. Aulaire: Animals Everywhere
6. J. Werner: Animal Friends
7. G. Blough: Animals That Live Together
8. G. Mason: Animals Tracks
9. B. Hader: Big Snow
10. M. Smith: Crocodiles Have Big Teeth All Day
11. M. Green: Everybody Has a House
12. G. Allen: Everyday Animals
13. M. Selsom: How to be a Nature Detective
14. T. Burgess: Picture Story Book
15. N. Zimmerman: Sleepy Forest
16. J. George: Snow Tracks
17. T. Burgress: The Adventures of Grandfather Frog
18. T. Burgress: The Adventures of Old Man Coyote
19. N. Belling: The Long-tailed Bear
20. I. Podendorf: The True Book of Animal Homes
21. G. Bell-Zano: The Wee Moose
22. P. Erickson: True Book of Animals of Small Pond
23. M. Schuchman: Walt Disney's Wild Animal Babies
24. C. Fox: When Winter Comes
25. E. Evans: Where Do You Live?
26. G. Blough: Who Lives in this House
27. G. Blough: Who Lives in this Meadow
28. J. Beatty: Wild Animal Stories and Pictures

Birds:

1. J. Watson: Bird
2. G. Pearson: Birds of America
3. L. & A. Hornblow: Birds Do the Strangest Things
4. G. Blough: Birds in the Big Wood
5. L. Hawkinson: Birds in the Sky
6. G. Conklin: If I Were a Bird
7. K. Boulton: Traveling with Birds
8. G. Darby: What is a Bird

Books: Agri-Business and Natural Resources-Farmer City Library
For Teacher:
V. Musselman: Learning About Nature Through Games

Records: Agri-Business and Natural Resources-Farmer City Library

1. Common Land Birds of North America
2. 14 Animals Rhythms
3. Familiar Birds
4. Familiar Water Fish
5. Songbirds of America in Color and Sound
6. Story of the Grasshopper and the Ants
7. Sounds of Animals
8. Moths and Butterflies
9. Reptiles and Amphibians

Games: From Learning About Nature Through Games by Virginia Musselman

1. What Do You See? page 19-20
2. Deer Stalking page 26
3. Still Pond, No More Moving page 27
4. Blind Man's Cane page 27
5. Deer Stalking page 28
6. Birds Fly page 29
7. Indian Hike page 31
8. Blind Game page 33

FIRST EXPERIENCE LEVEL

Occupational Cluster: Health Occupation

Major Project: Nurse-Unit on First Aid

Subject Matter: Language Arts, Mathematics, Science, Social Studies

Career Development Concepts:

Major Concepts: Attitudes and Appreciations
Society is dependent upon the productive work of individuals.

Subconcepts: Coping Behavior
An individual should learn to cope with the rights and feelings of others. Several skills may be required to perform a given task.

Subconcepts: Decision Making
Things change and influence the choices and decisions one makes. Problems which conflict with one's goals can be identified and assessed.

Subconcepts: Lifestyle
Lifestyle depends on your values.

Subconcepts: Self-Developing
An individual's interests, aptitudes, values and achievements are not always the same as these of his peers.

Subconcepts: Career Information
Occupations may have certain dress requirements. Occupations have their own vocabulary. Occupations require special personal characteristics.

Teacher Goals:
Make students aware of the different kinds of nurses and the importance of their jobs in our society.

Pupil Performance Objectives: Mathematics

1. Students will be able to measure.
2. Students will be able to count to 20.
3. Students will be able to make graphs.
4. Students will be able to tell time-hour-half hour.
5. Students will be able to make story problems.
6. Students will be able to count by 2's, 5's, 10's.

7. Students will be able to understand the teens.

8. Students will be able to "read" the temperatures on the thermometers.

9. Students will be able to use the calendar.

Pupil Performance Objectives: Language Arts

1. Students will be telling complete stories.

2. Students will be using visual discrimination.

3. Students will be using descriptive words.

4. Students will be following directions.

5. Students will be role playing.

6. Students will be good listeners.

7. Students will be able to finish open-end stories.

8. Students will be learning new vocabulary words.

9. Students will be able to make a small dictionary from the new vocabulary words.

Pupil Performance Objectives: Social Studies

1. Students will be able to compare the Nursing Career with other careers they have studied about this year.

2. Students will be able to relate the duties, responsibilities, and rewards of being a nurse.

3. Students will learn about interdependence.

4. Students will learn about the wants and needs of people.

5. Students will learn about the history of nursing.

6. Students will learn about different lifestyle.

7. Students will learn about self-awareness.

Pupil Performance Objectives: Science

1. Students will be able to see likenesses and differences.

2. Students will be able to observe and investigate.

3. Students will be able to see the necessity for cleanliness.

4. Students will be able to categorize.

5. Students will be aware of different sights and sounds.

Major Activity:

Role play nurse in Emergency First Aid

- A. Learn to stop bleeding
  - Apply dressing
  - Apply pressure
  - Secure bandage
  - Elevate bleeding portion above heart
  - Treat for shock
- B. Caring for Wounds
  - Soap
  - Water
  - Remove foreign objects
  - Bandage
- C. Learn Care for Broken Bones
  - Splints
    1. a sturdy stick
    2. an umbrella
    3. board
    4. roll of newspaper
- D. How to transport insured person
  1. Bleeding should be stopped.
  2. Breathing should be established.
  3. Fractures should be splintered
  4. Shock should be treated
  5. Use stretcher or saddle-back carry

Additional Activities:

1. Learn some simple first aid rules

2. Dramatize as a nurse-male or female

3. Count "pills" by 2's, 5's, 10's.

4. Measure a "baby" using inches and centimeters

5. Keep dates on the calendar.

6. Count "tongue depressors" in the teens

7. Use puppet nurses to tell stories.

8. Make a picture dictionary about nurses jobs.

Discussion Questions:

1. How long do you need to study to be a nurse?

2. What are some of a nurse's responsibilities?

3. What kinds of nurses are there?

4. Are nurses women only?

5. Why do you think someone might want to be a nurse?

6. Is the nursing job always a happy one? a sad one?

7. What kind of personality must a nurse have?

8. Is the nursing job hard or easy? Why?

9. Who in this room might want to be a nurse?

10. How do people accomplish their jobs in this occupation?

11. What are names of some of the other people a nurse might work with?

12. Discuss proper use of medicine. Proper methods of taking medicine (with adult help or child taking it alone).

13. Describe ways a nurse helps us.

Occupac Kit: Health Occupation

1. Thermometer
2. Tongue depressor
3. Nurse cap
4. nurse uniform
5. hypodermic needle
6. band aids
7. cotton balls
8. alcohol bottle
9. stethescope
10. charts
11. watch
12. eye chart
13. Presometer
14. splints
15. gauze
16. soap

Human Resources:

Nurses:
Phyllis Fehr-Registered Nurse
Jean Sharkey-School Nurse
Joyce Lee-Reg. E.M.T. and Nurse

Material Resources:

Books: Occupation - Mansfield Library
M. Davis: Careers in a Medical Center
J. & N. Wilkinson: Come to Work with us in a Hospital

Filmstrip:

1. Career Awareness Series-Hospital

2. Job Opportunities Now-Group 1-A612SATC-Hospital

Folders:
1. Career Pictures-Health-Weekly Reader Awareness Program
2. Health Card from Mini Productions, Inc.

Books: Health Occupation-Farmer City Library
1. C. Greene: I want to be a Nurse
2. M. Schima: I Know a Nurse
3. C. Greene: Doctors and Nurses

Studyprints:
1. Hospital Helpers

Lightning splits the cumulonumbus clouds. Thunder shakes the earth. The wind freshens. You run for cover. Why is weather always changing? How is weather made? It is hoped that the students will be able to discover the answers to these questions and many more as they "Explore Weather". They will have an opportunity to make weather instruments, set up a weather station, record their findings, create a terrarium, visit interesting places, and meet exciting people as they are introduced to the careers in the Environmental Occupation Cluster.

SECOND EXPERIENCE LEVEL

Occupational Cluster: Environmental Control Occupation

Major Project: Meteorologist

Subject Matter: Language Arts, Mathematics, Science, Social Studies

Subject Matter Focus: Language Arts

Review handwriting skills; correct spelling (encouraged in all written work); proper grammar and usage in oral and written work; dramatization skills; develop critical thinking; improve listening and speaking skills; dictionary skills (locating information and alphabetizing); introduction to newspaper.

Subject Matter Focus: Mathematics

Addition and subtraction facts (1-20); measurement (temperature, rain, etc.) introduce metric measurement; geometric shapes; place value, fractions; patterns and sequence; symbols; charts, graphs, calendars, map.

Subject Matter Focus: Social Studies

Map and globe skills; community workers and services; related business establishments; climate and seasons; government helps people; dependance and interdependance of community workers; technology produces change; communities help one another.

Subject Matter Focus: Science

Problem solving; collecting, classifying, and reporting data; drawing conclusions; plants and their care; weather observations and use of instruments; investigate and evaluate techniques.

Career Development Concepts:

Major Concept: (Decision Making) Basic components of the decision making process can be applied to the establishing of personal goals and the making of career-related decisions.

Sub Concept: (Decision Making) An individual should consider alternative ways to reach a given goal.

Sub Concept: (Career Information) Occupations require the use of specific materials and equipment.

Sub Concept: (Career Information) Occupations have their own vocabularies.

Sub Concept: (Attitudes and Appreciations) Specialized occupations result in an interdependent society.

Teacher Goals: (Language Arts)

1. Draw attention to legendary stories and ideas about the weather.
2. Emphasize that communication plays a vital role in the career of a meteorologist.

Pupil Performances:

1. To familiarize the students with the techniques of contacting a resource person, interviewing, and note taking.
2. To identify sayings and fables derived from weather observation.
3. To develop an appreciation for poetry and the art of story telling as related to weather.
4. To develop the skills of listening and speaking when reporting and broadcasting.
5. To use properly vocabulary terms connected with a weatherman's work.

Suggested Activities and Discussions:

1. Prepare the student to properly converse with individuals from the Environmental Control Cluster by providing them with the necessary information and techniques for contacting a resource person, interviewing, and note taking. (Detailed information can be found in the front of this guide)

   Follow-up Activity - "Hats for Sun, Wind, and Rain"
   Begin the discussion so that students can share their ideas on the importance of hats and why workers wear them. "Many people who work outdoors wear hats that help protect them from the hot sun, the wind, and the rain. A cowboy's hat has a broad brim. When the cowboy is out in the hot sun, the brim on his hat shades his eyes. In stormy weather, it helps keep the wind and rain out of his eyes." (additional ideas may be found in Childcraft, vol. 8 "What People Do", pp. 5-17)

   Invite the students to bring in hats related to the various careers in their environment. When assembled, they can be placed on a "Hat Tree." These hats may be used by the students for role playing activities throughout the school year.

   Compile a file of hats worn by a variety of workers to be placed in Occupac. The format of the information can be decided upon by the group.

A Hat for Magic

A magician's hat is tall and black. He seldom wears it on his head. Most of the time he is pouring water and breaking eggs into it. And when you think it's empty, he'll pull out a rabbit. How does he do it? Sometimes he has a hidden compartment.

2. The purpose of this activity is to make the student aware of familiar sayings, expressions, fables, and folklore related to weather. "Can animals forecast the weather?" People used to think that animals knew when the weather was going to be bad. Even today some people think "the more nuts squirrels gather in the fall the colder the coming winter will be." But we know that squirrels will gather as many nuts as they can find. Others say that "Flies bite more before a rain." But flies bite just as much before fair weather as they do before a storm.

   Additional ideas and enrichment material can be found in:
   Disney's Wonderful World of Knowledge, pp. 104-112
   Everybody's Weather, by Joseph Gaer, pp. 35-58
   The Worldbook Encyclopedia, vol. 21 (1972 edition) pp. 136-137
   The Farmer's Almanac

3. The following fable "The Wind and the Sun" can be used to show how early people used weather in their story-telling. (A group of advanced students might work on myths and the effects weather had on the role of the gods and goddesses.)

   A dispute once arose between the wind and the sun as to which was stronger.

   To decide the matter, they agreed to try their power on a traveler. That party which should first strip him of his cloak was to win the day. The wind began. He blew a cutting blast, which tore up the mountain oaks by their roots and made the whole forest look like a wreck. But the traveler, though at first he could scarcely keep his cloak on his back, ran under a hill for shelter and buckled his mantle about him more closely.

   The wind, having thus tried his utmost power in vain, the sun began. Bursting through a thick cloud, he darted his sultry beams so forcibly upon the traveler's head, that the poor fellow was almost melted. "This," said he, "is past all bearing. It is so hot that one might as well be in an oven." So he quickly threw off his cloak and went into the shade of a tree to cool himself.

   This fable teaches us that gentle means will often succeed where forcible ones will fail.

   Discuss the fable with the children. What would have happened if the wind had won? Encourage them to write or tell a fable of their own using weather elements.

4. To reinforce the vocabulary of a meteorologist, invite the pupils to play "Weather Watch". The following list of words can be printed on game cards:

   temperature
   atmosphere
   instruments
   forecast
   front
   frost
   sleet
   snow
   tornado
   atmosphere
   droplets
   hail

water vapor
computers
pollution
barometer
forecasts
humidity
moist
precipitation
heat
pressure
meteorologist
rain gauge
wind
hurricane
dew
fog
National Weather Service

5. Photographs can be taken by the students and teacher of the various cloud formations and sunsets. Suggest that children bring in any of their own pictures to share with the class. Use any appropriate charts you might have. After discussion of the pictures suggest they write poems using clouds and/or sunsets as their themes. Copies of the finished poems can be placed in a book and displayed on the Language Arts table for the class to enjoy. Illustrations might be added to make the students' work more attractive. (Poems on "Weather" in Childcraft, vol 1.)

6. Tape a radio weather broadcast at three different intervals by a variety of meteorologists. Play recordings to class and discuss the techniques used in the programs so the students will be able to tape their own broadcast.

Teacher Goals: Math

1. Help children apply their own skills to tasks performed by a weatherman.
2. Develop mathematical skills needed by individuals in the field of meteorology.

Pupil Performances:

1. To become familiar with the metric system.
2. To gain an understanding of number relationships and sequence.
3. To use a calendar to chart the weather conditions for one month.
4. To learn to record information obtained from weather instruments on charts and graphs.
5. To become familiar with geometric shapes to be used in making "wind chimes".
6. To set up and solve mathematical problems.

Suggested Activities and Discussion:

1. Provide students with blank calendar (Activity sheet) which can be completed for the month of September. Also construct a large bulletin board calendar to be used by the teacher.

   The students will chart the daily weather conditions. Symbols to be used to designate the various weather conditions can be decided upon by the class. Possible suggestions are on an Activity Sheet.

   Each day discuss class predictions and compare them to that of a weather broadcast or that in the newspaper.

2. Introduce the students to a weather thermometer and show them how it operates. Provide them with the necessary instruction on reading a metric and a Fahrenheit thermometer.

   Students will be assigned daily to record temperature readings at two intervals and chart them on a graph (Activity Sheet). At the same time the students may record the water temperature of a pail of water using a separate graph. Discussion will include temperature extremes and comparisons.

   The students will constantly be using math skills (addition and subtraction) when computing, calculating and tabulating the weather data. Story problems can be provided by the teacher. The students can also be responsible for creating their own story problems to go along with their findings. A special section of the chalkboard can be reserved for student problems.

   The student will also be provided with instruction in reading and charting a barometer, rain gauge, and wind sock.

3. Introduce various geometric shapes to the students. Provide a variety of materials that might be used in construction of a wind chime (clay, metal washers, nail, bamboo, etc.) Discuss the variation of sounds and how they can be acquired when making the wind chime. Play with Wind, Smith, Howard, p. 20)

Teacher Goals: (Science)

1. Provide situations in which children have an opportunity to learn that studying a specific occupation will increase knowledge about special facets of many occupations.

Pupil Performances:

1. To acquaint the student with the specialized instruments used by meteorologists.
2. To build the classroom models of the various weather instruments which will be used by the class in collecting data.
3. To collect materials for a Meteorologist's Occupac.
4. To become familiar with weather symbols.
5. To tape weather broadcasts for three days to become familiar with weather terms.
6. To witness weather data being collected by experts.
7. To construct a controlled weather atmosphere to be used and observed in the classroom.

Suggested Activities and Discussion:

1. Introduce the weather unit with overhead transparencies "Weather" (F) and filmstrip "Our Weather" (Primary Science E.B.-C 24--F) Teacher/pupil discussion follows:

   Why is it necessary to understand the weather?

How does the sun effect the earth?
What could be learned by constructing and operating a classroom weather station?

2. Provide students with individual filmstrip viewer and Set I of weather filmstrips "Why of Elementary Science F38-F41" in classroom science cents. Encourage them to view filmstrips in free time. Compile lists of questions to be answered in class discussions.

3. Form committees and assign various weather measuring instruments to be made for classroom weather station (rain gauge, barometer, wind gauge, wind sock, etc.). Provide extra materials so that students will have an opportunity to create similar instruments for personal use. Make additional instruments to be placed in Occupac.

   The following ideas, instructions, and directions are from Children's Playcraft, Parents' Magazine, Jan. 1975, pp. 10-25.

4. Culminating Activity - Take nature hike collecting specimens for a controlled atmosphere terrarium so the students will be able to observe actual weather conditions within the classroom. Discuss how to care for the terrarium and the plants' needs for food, light, water, and soil. Discuss the role of environmentalists in providing these things on a larger scale.

   Invite resource person (florist, science or Vo. Ag. teacher) to guide in preparation of terrarium.

Teacher Goals: (Social Studies)

1. Plan opportunities for pupils to develop responsibility for choosing and carrying out learning tasks.
2. Guide pupils in awareness of the informative role of the weatherman.

Pupil Performances:

1. To understand how government provides services that benefit the total community.
2. To learn the importance of sharing a wide variety of weather data.
3. To realize the value of human resources in weather information and its influence on one's activities.
4. To understand that one's environment influences that individual's life style.

Suggested Activities and Discussion:

1. Plan a field trip to Capital Airport, Springfield, or Willard Airport, Champaign-Urbana. Suggest that the meteorologist discuss the importance of the job, training, and necessary skills.

2. Invite speakers at appropriate times to share ideas and work experiences with class. Possible consultants might include weather broadcaster, soil conservationist, forest ranger, game warden, farmer, pilot, camp counselor.

3. To illustrate the effects of weather on leisure time, plan an outing to Lodge Park. Special consideration will be given to planning a menu, recreational activities, proper dress, and safety. Three possible plans will be devised to allow for good weather, cold weather, and rainy weather.

   Follow-up Activity on values. Illustrate how rainy weather would have affected our disposition. OR how you felt on the outing. Whip -- with the options to tell the truth or pass. I had the most fun........ If only I hadn't..........

4. Send up wind balloons. Attach self-addressed postcard (tothe student at school) to a balloon or group of balloons. The attached card used in the ascension of the balloon might look like this:

Date sent: ____________________
Time sent: ____________________
Location Sent From: ____________________

Found by: ____________________
Location: ____________________
Date: __________ Time: __________
Comments: ____________________
____

Supplemental Enrichment Activities and Discussion:

Teacher Goal:

1. Provide the student with an awareness of the role of art, music, and physical education as it relates to weather.

Pupil Performances:

1. To express ideas and feelings acquired through the study of weather.
2. To stimulate an appreciation for music.
3. To experiment with one's body in movement and play.

Suggested Activities:

Art

1. Construct pinwheels in a situation where the student works independently. Provide the necessary materials (paper, scissors, pencil, tack, and tape) and directions. Play With the Wind. p. 36.
2. Draw and paint posters showing the preparation one makes when there is a change in the weather.
3. Construct weather murals showing weather conditions and instruments. Discuss the effects of color and how it can be effectively used to relay special mood (cool, hot, etc.) Provide the child with multi media and encourage him to use a variety of materials.

Physical Education

1. Take a nature hike.
2. Invite the children to pantomime various activities which can be carried out in certain weather conditions (rain--stomp puddles; snow--snowball fight; winter--ice skating; summer--swimming).
3. Explore movement. If you were a rain drop, how would you move?
4. Make up a weather dance and select your own music, recording, or student accompaniment.
5. Play "Weather Tag."

Music

1. Show directions in melody by playing with bells or xylophone Song "Brother Noah", p. 6, Silver Burdette Music (3).
2. Take turns playing chords on the Autoharp as others sing the melody to "Ain't Gonna Rain", p. 15.
3. Introduce composers. Listen to "Rain Song", p.49.
4. Learn to read poetry that has musical sounds. Use voice to produce sound changes "Rain Sizes", p. 60 and "The Wind Has Such a Rainy Sound", p.63.

Suggested Human Resources:

- Weatherman
- Forest Ranger
- Soil Conservationist
- Environmental Specialist
- Conservationist
- Game Warden
- Pollution Controller
- Farmer
- Pilot
- Camp Counselor
- Teacher

Suggested Material Resources:

Books (Franklin Library)

Aesop, The Fables of Aesop, "The Wind and the Sun"
Baker, Eugene: I Want to be a Weatherman
Bell, Thelma: Snow
Bell, Thelma: Thunderstorms
Berger, Melvin: Storms
Berger, Melvin: The National Weather Service
Blough, Glenn: After the Sun Goes Down
Blough, Glenn: Not Only for Ducks
Branley, Franklin: Flash, Crash, Rumble, and Roll
Branley, Franklin: Rain and Hail
Chester, Michael: Stop Air Pollution
Dayrell, Elphenstane: Why the Sun and Moon Live in the Sky
Fisher, Aileen: I Like Weather
Freeman, Mae: Do You Know About Water?
Friskey, Margaret: The True Book of Air Around Us
Gates, Richard: A Book of Conservation
Hatch, Shirley C.: Wind is to Feel
Keats, Ezra Jack: The Snowy Day
Koch, Dorothy: Let It Rain
Larnich, Nancy: Rain, Hail, Sleet, and Snow
Lee, Joan: Watch the Clouds
McGrath, Thomas: Clouds
Parker, Bertha: Fall is Here, Spring is Here, Summer is Here, Winter is Here
Rathman, Joel: At Last to the Ocean
Relbyen, Gladys: The Night the Storm Came
Rosenfeld, Sam: A Drop of Water
Shannon, Terry: Come Summer, Come Winter
Waller, Leslie: Weather
Wong, Herbert: Our Terrariums
Compton's Encyclopedia and Fact Index, vol. 26, p. 83
Air and Air Pressure Kit
Spice Probe, p. 83-118, an entire activity unit on weather

Filmstrips:

The Seasons (SVE) a-1 Fall is Here; a-2 Winter is Here; a-3 Summer is Here; a-4 Spring is Here
True Book of Social Studies (SVE) a-17 Airports and Airplanes
Calendar Series (McGraw-Hill) a-33 Spring and Summer; a-34 Autumn and Winter
Basic Science Group I (SVE) a-35 Finding Out How Plants Grow
a-37 Finding Out About Land, Air, and Water

Basic Science Group II (SVE) a-42 Finding Out About Clouds;
a-43 Finding Out About Day and Night
Learning to Use Maps
c-5 Reading Directions on maps
c-6 Measuring
c-7 Locating Places on maps
c-8 Reading Physical maps
Nature Studies Series, c-32 A Walk in the Woods
Primary Science
c-23 The Seasons
c-24 Our Weather
National Parks & Monuments of the U.S., d-1 Yellowstone Natl. Park
True Book Filmstrip of Physical Science, c-40 Seasons
New Basic Weather (SVE) c-42 Why Does it Rain, Snow, Hail, Sleet?
Why of Elementary Science- Set I - Weather, f-38 Why does it Rain?
f-39 Why do we Have Wind? f-40 Why do we Have Warm and Cold?
f-41 Why do we Have Day and Night?
Why of Elementary Science - Set II - Heat, g-20 How Heat Helps Us,
g-21 Where Heat Comes From, g-22, How a Thermometer Works,
g-23 How Heat Moves, h-6 Follow the Rainbow and Catch Colors,
h-7 The Busy Wind - Our Invisible Friends

Filmstrips with records:
Listening, Looking, and Feeling Wind and Rain
What is a Desert?

Records
The Rainy Day Record

Study Prints
sp 115 Familiar Cloud Forms

Suggested Material Resources (Mansfield Learning Center)

Books
Baker, Eugene: I Want to be a Weatherman
Bendrick, Jeanne: The Wind
Berger, Melvin: Storms
Branley, Franklin: What Makes Day and Night?
Busch, Phyllis: A Walk in the Snow
Cartwright, Sally: Why Can't You See The Wind?
Darby, Gene: What is a Season?
Duvoisim, Roger: The House of Four Seasons
Fisher, Aileen: Where Does Everyone Go?
Gibson, Gertrude: About our Weather
Gaudey, Alice: The Day We Saw The Sun
Hutter, Kathryn: Hurricanes, Tornados, and Blizzards
Johnson, Crockett: Will Spring be Late or Will Spring be Early?
Larrick, Nancy: Rain, Hail, Sleet, and Snow
Larrick, Nancy: Jr. Science Book of Rain, Hail, Sleet, or Snow
McGrath, Thomas: Clouds
May, Julian: Climate
May, Julian: Weather
Parker, Bertha: Ways of the Weather
Scanlon, Marion: Three Little Clouds

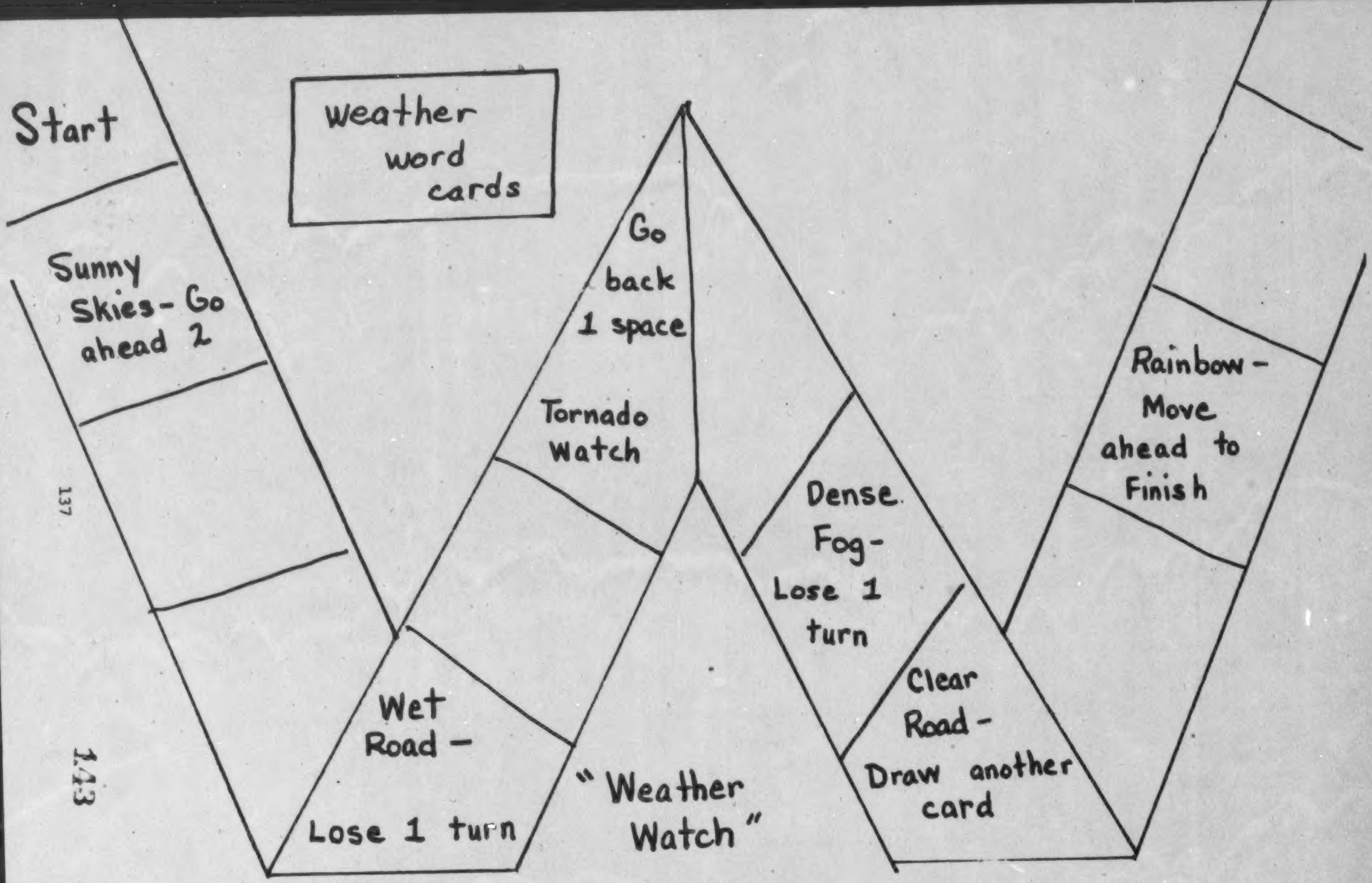
Shigley, Forrest: Randy Raindrop
Smith, Howard: Play With the Wind
Tannehill, Ivan: All About the Weather
Tresselt, Alvin: It's Time Now
Waller, Leslie: A Book to Begin on Weather
Webster, David: Snow Stumpers
Zim, Herbert: Lightning and Thunder

Filmstrips

Educational Activities, Inc. (551.6) Know Your Weather, Exploring Weather, Forecasting Weather
Building a Classroom Weather Station (551.5)
How Climate Affects Our Lives (551.6)
Measuring Temperature (536 N)
Indoor Weather (551.5)

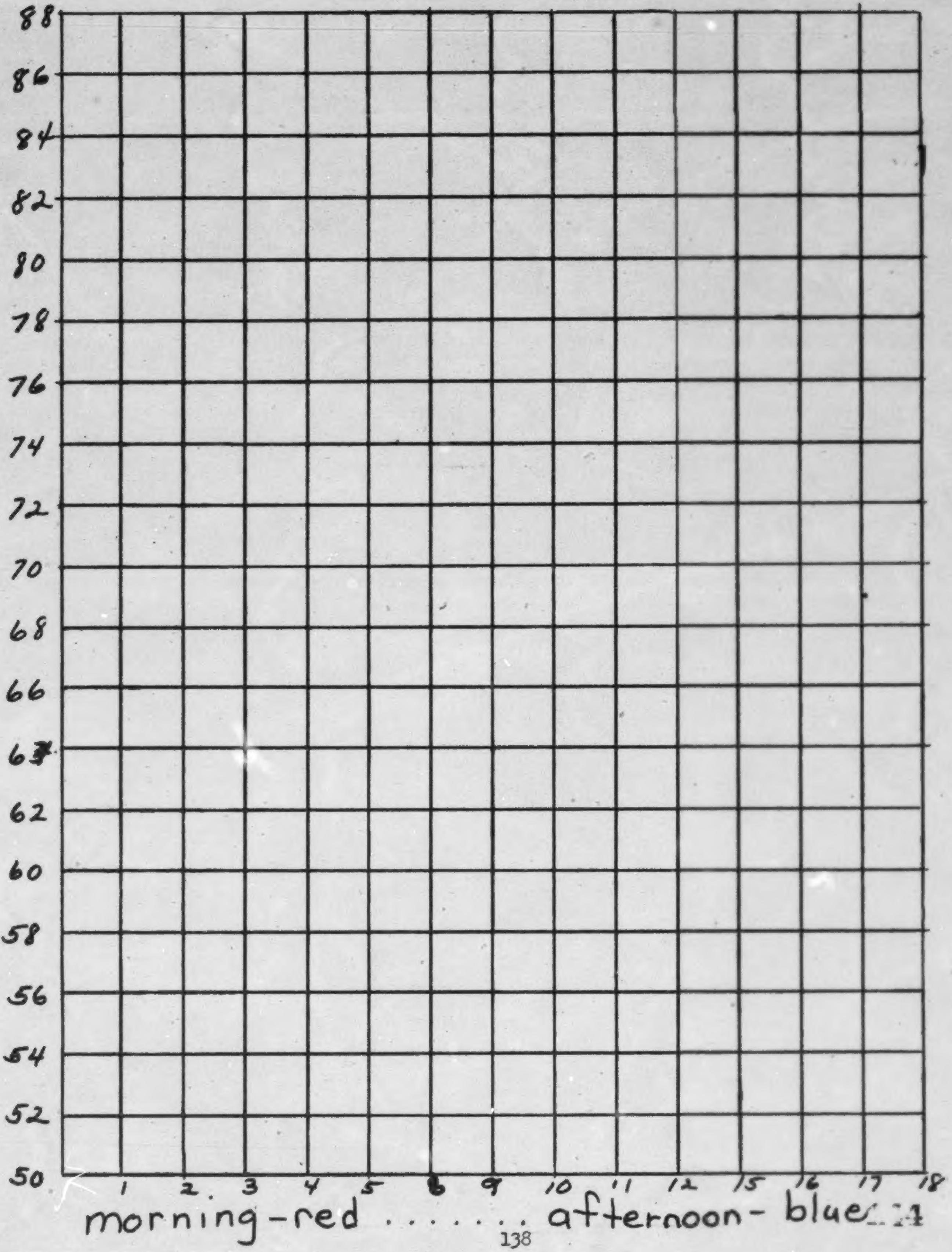
Study Prints (Coronet Study Prints 551.9)

Climate of the World
Arid Lands
Cold Lands
Tropical Lands
Temperate Lands


Start
weather word cards
Sunny Skies- Go ahead 2
Go back 1 space
Tornado Watch
Wet Road - Lose 1 turn
"Weather Watch"
Dense Fog- Lose 1 turn
Clear Road- Draw another card
Rainbow- Move ahead to Finish

Draw a card from the "Weather Word" pile. Pronounce the word.
If correct move number of spaces listed on the back.

Outdoor Temperature Graph

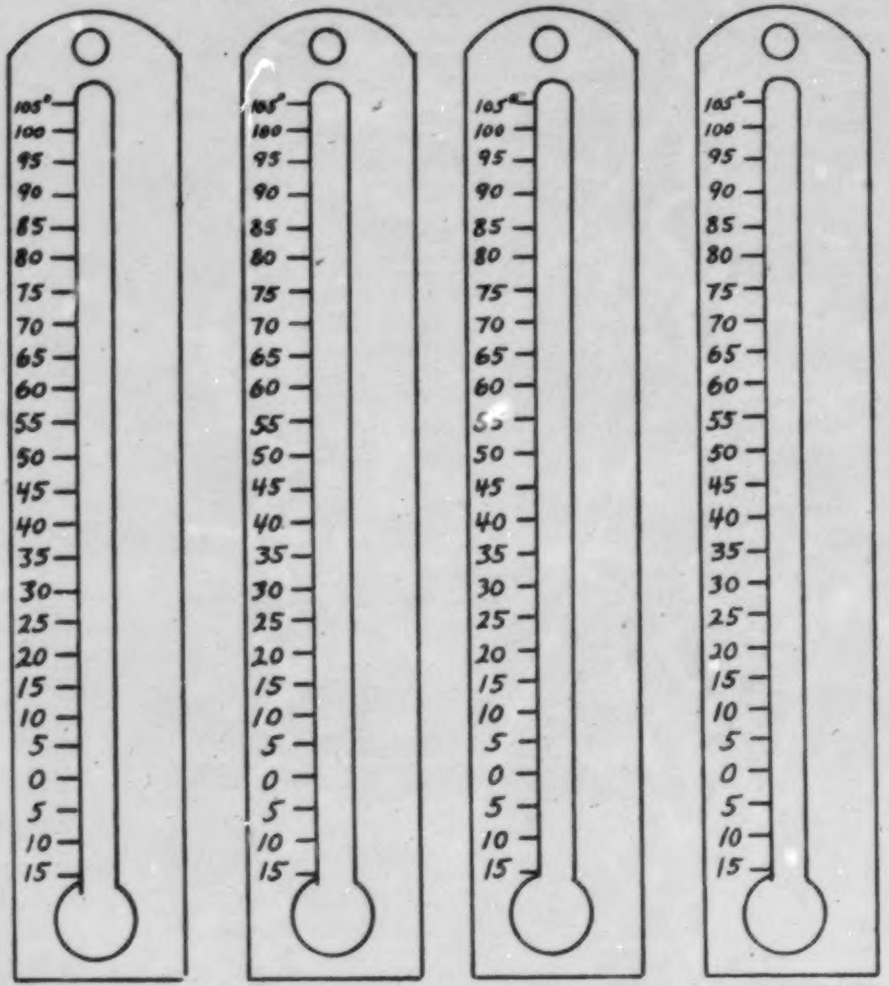


HEAT TODAY

Keep track of temperature at school.
Find a place to put a thermometer.
Mark the thermometers on this page.
Choose a different time for each thermometer.

Date

Time


105°
100
95
90
85
80
75
70
65
60
55
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35
30
25
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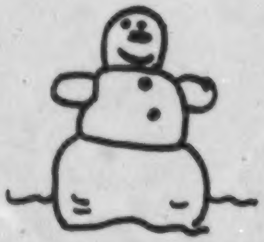
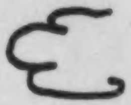
15
10
5
0
5
10
15

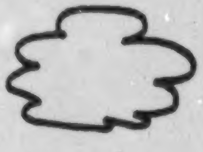
Degrees



Snowy

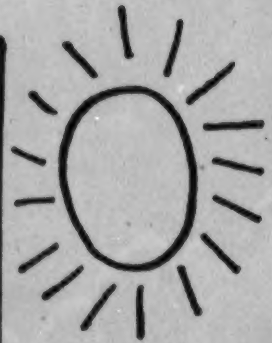


Partly Cloudy

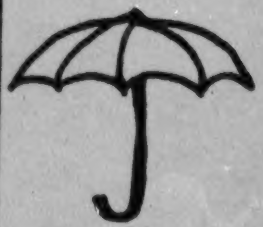


Cloudy

Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.

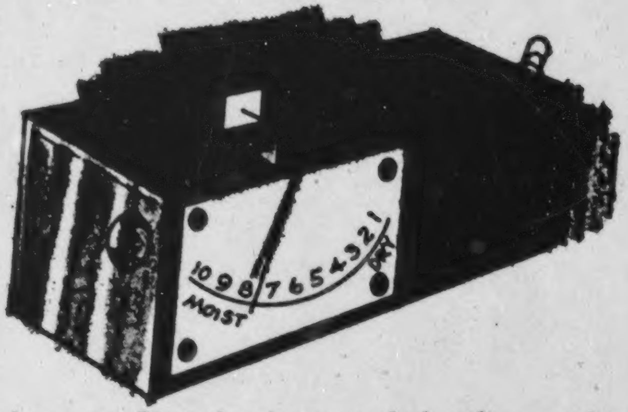


Sunny



Rainy

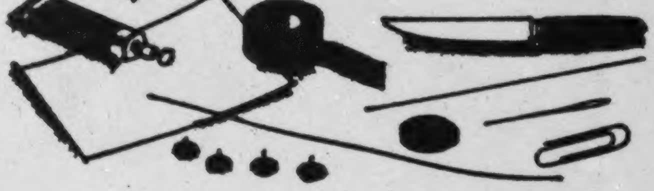
MEASURING MOISTURE
HAIR HYGROMETER



A hair hygrometer *(hi-grom'e-ter)* measures the humidity, or moisture, of the air. This is a useful piece of information in forecasting the approach of a warm front, with its days of drizzle, and a cold front, with its quick showers followed by clear cool weather.

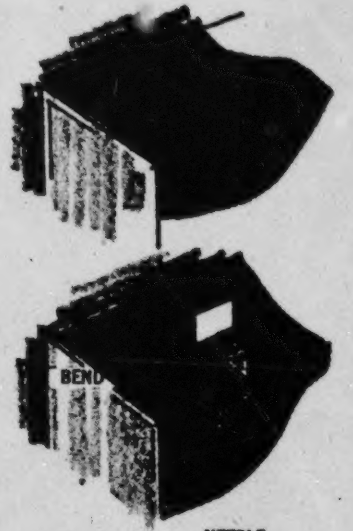
MATERIALS NEEDED:

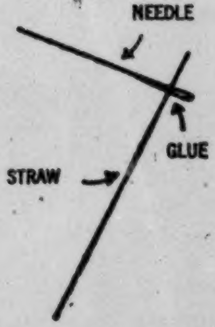
An empty milk carton washed out with cold water; a needle; a broom straw; cellophane tape; nail polish or glue; a human hair at least 9" long; 4 pins or thumb tacks; a sharp knife; a blank card; a paper clip; a penny.



HOW IT WORKS

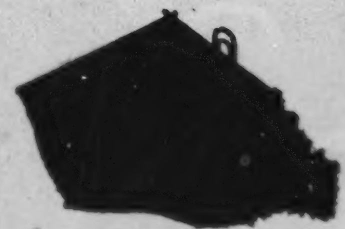
Humid air causes the hair to stretch, while dry air makes it shrink. This change in length is very slight—you'd have a hard time measuring it with a ruler. But if this slight change is magnified, we can see it and make use of it. And that's what the needle and broom straw do—they magnify the change in size. When the hair shrinks a hundredth of an inch, the tip of the broom straw will move about 1¼". That's a magnification of 125 to 1.

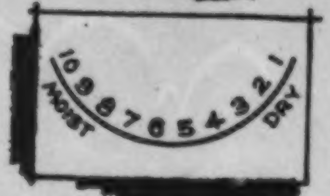


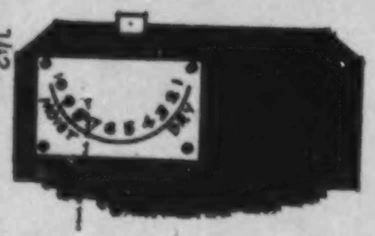


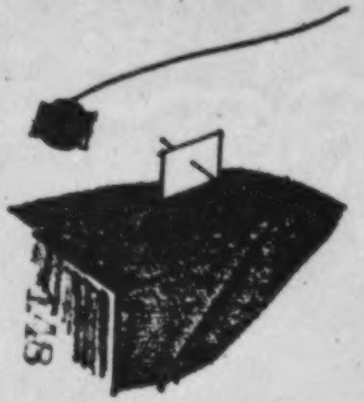
HOW TO BUILD IT

1. Wash the hair with soapy water or alcohol, and then rinse it in clear water and put it aside to dry.
2. With your knife, cut an H at one side of the milk carton.
3. Bend up the two tabs in the H, and punch a hole in each with your needle. Twist the needle around a bit so that the holes permit the needle to turn freely.
4. Split off a piece of broom straw about 3" long, with one end just thick enough to push into the eye of the needle. Put a dab of nail polish or glue to fasten it there, and let it dry.
5. Cut a narrow slit at the far end of the carton, then push the paper clip half way in.
6. With a compass or a drinking glass as a guide, draw a half circle on the card, and print the words *dry* and *moist* as shown on p. 12 and the numbers 1 to 10 along the half circle.
7. With four pins or thumbtacks, fasten the card to the carton.
8. With cellophane tape, fasten one end of the hair to the penny. Try not to touch the rest of the hair, because the grease from your skin









prevents the hair from absorbing moisture.

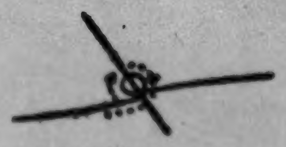
9. Place the needle and straw into the holes in the H tab.

10. Wind the hair around the needle, one turn from underneath and around. Slip the free end of the hair into the paper clip, and fasten it with a dab of glue or nail polish. The penny should hang about 1" over the end of the carton.

Now you're all ready, except for adjusting your hygrometer. The broom straw needs to be set to show the right humidity. There are two ways of doing this:

1. Set the hygrometer on a level surface in your bathroom. Turn on the shower and let it run until the mirror and windows cloud up. Now the air is full of water vapor, or 100% humid. You will see the broom straw turn slowly as the hair stretches. It will finally come to a stop when the hair has stretched as far as it will in completely damp air. Now turn the broom straw so that it points to the number 10. Then carefully carry the hygrometer out of the bathroom and set it gently in a shaded, protected place where you plan to keep it.

2. Another way of setting your hygrometer is to place it in a large metal container, such as a bucket, together with a damp washcloth next to it, and cover the bucket with a damp towel. After fifteen minutes, take off the towel and immediately set the pointer to number 10.



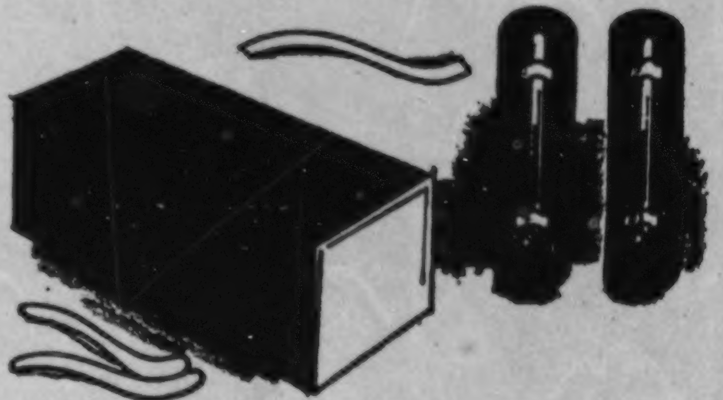
FIRST UNDER THE NEEDLE
THEN OVER AND AROUND

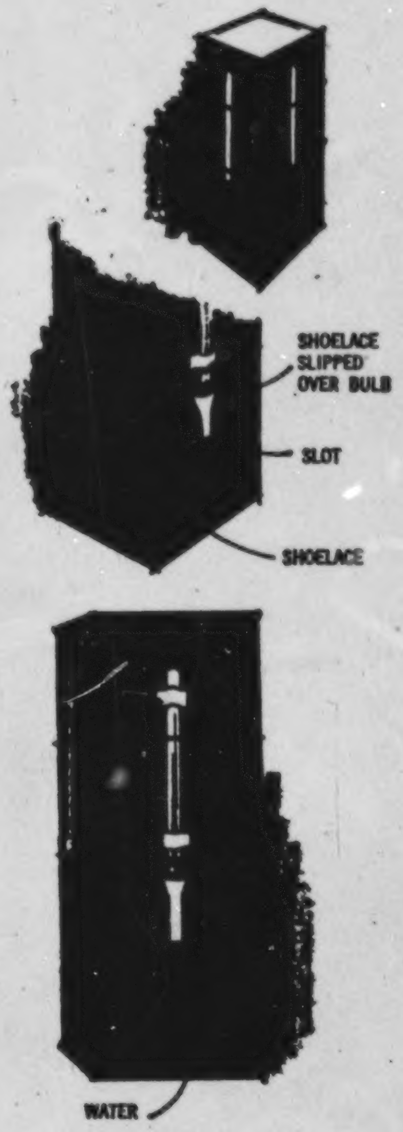
WET-AND-DRY-BULB HYGROMETER

This is another type of hygrometer, with two advantages and one disadvantage over the hair hygrometer. It does not require setting of a pointer because there is no pointer, and it is quite accurate. However, it costs more because you have to buy two thermometers.

MATERIALS NEEDED:

A clean milk carton, 2 rubber bands, 2 identical thermometers (the inexpensive variety store kind will do). You will also need a piece of wide white cotton shoelace, about 4" long.





HOW TO BUILD IT

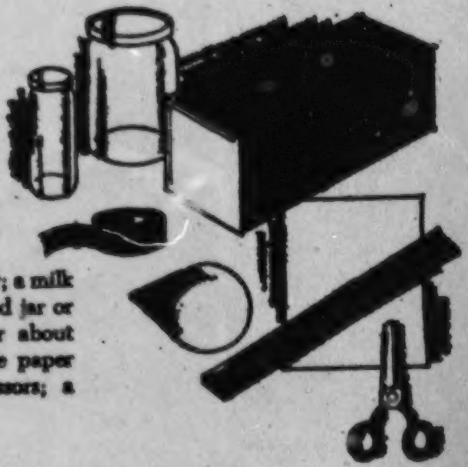
1. Boil the piece of shoelace for a few minutes to wash out any chemicals that may be in it.
2. Cut a little slot in one side of the carton, about 2" from the bottom.
3. Hold one thermometer on adjacent sides of the carton, and snap the 2 rubber bands around to hold them in place.
4. Then slip one end of the shoelace through the slot, into the carton, until it lies on the bottom. Push the other end around the bulb of one of the thermometers.
5. Then pour water into the carton through the top, almost as high as the slot. If you find that the instrument is tippy and tends to fall, it is because your particular thermometers are extra heavy. In that case stand it next to a wall and push 2 pins through the upper corners of the carton into the wall.

HOW IT WORKS

When you step out of a warm bath, you feel cool even though the room may be quite warm. This is because water is evaporating from your skin. When water evaporates from something, it cools the thing from which it is evaporating. The faster the evaporation, the cooler you feel. When you go from the warm bathroom into your warm bedroom, you feel cooler still. This is because the bedroom air has less moisture in it and can take up the moisture from your skin very quickly. We can put it this way: Dry air permits quick evaporation and produces lots of cooling. Moist air permits slow evaporation and produces less cooling. The dryer the air, the more cooling takes place.

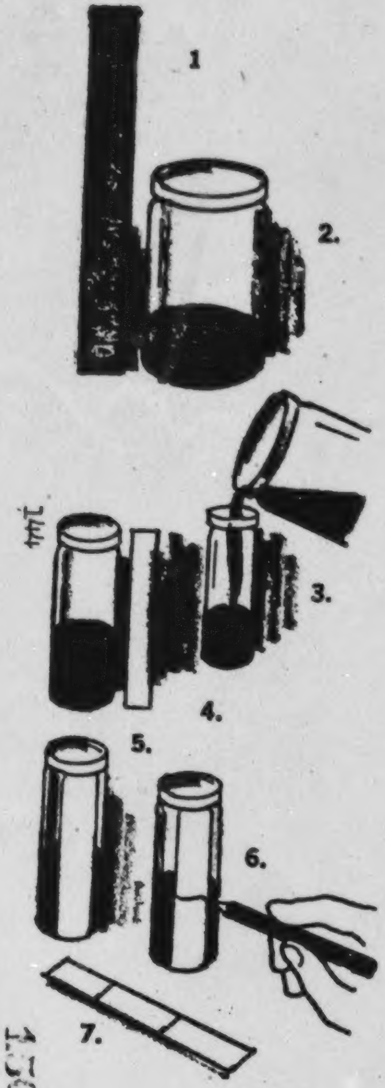
RAIN GAUGE

This instrument measures the amount of rainfall. Actually, any open container with straight sides can be used for measuring rainfall. All you need do is stick a ruler into the water, zero end down, and see how far up the ruler becomes wet. If the ruler is wet up to the 2" mark, then 2" of rain have fallen. The trouble with this method is that an ordinary rainfall is much less than an inch, and a light shower may be only a fiftieth of an inch. You would have a hard time measuring such slight amounts along an ordinary ruler. We need some way of magnifying the reading on the ruler, and we have such a way. We use a wide funnel pouring into a narrow jar. You will understand it better after you have built it.



MATERIALS NEEDED:

A pointed paper cup; a ruler; a milk carton; a small straight-sided jar or medicine vial; a larger jar about the same size across as the paper cup; cellophane tape; scissors; a sheet of white paper.



HOW TO BUILD IT:

1. Place the ruler, zero end down, alongside the large jar.

2. Pour water into the jar until it reaches a height of 1".

3. Then pour this water into the little jar.

4. Now cut a strip of paper about ½" wide and as high as your little jar.

5. Place this strip against the outside of the little jar, with the bottom of the strip exactly alongside the bottom of the water in the jar.

6. Make a pencil mark on the paper, at the top of the water.

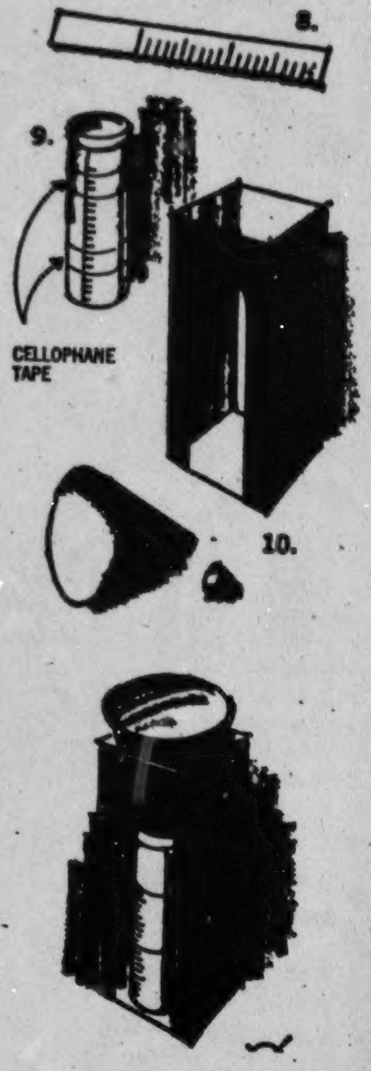
7. Now put the paper down on the table, and make another mark, the same distance from mark number one as that one is from the bottom of the strip.

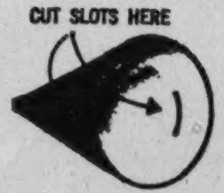
8. This step calls for some measuring with your eyes. Divide the space between each mark into ten equal spaces and make a small pencil mark at each.

9. Place your paper strip against the jar, with the marked side next to the glass, and fasten it by winding several strips of cellophane tape around the jar.

10. Cut the tip off the paper cup, and the top off the milk carton. Also cut a large opening in one side of the carton, as in the picture.

Now you're ready to assemble your rain gauge. Empty the little jar and put it inside the carton, with the paper strip to the back so you can see the markings through the glass. Put the paper cup on top, and you're all set. To use your rain gauge, it's obvious that you'll have to place it out in the rain. It's best to put it inside a large can or bucket, because the whole gauge is rather light and can be blown over by a moderate wind. Once a day, measure the rainfall (if there has been any) by seeing what line the water level is up to, and then pour out the water. Each line marks a tenth of an inch of rainfall.





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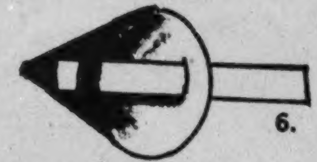

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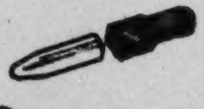

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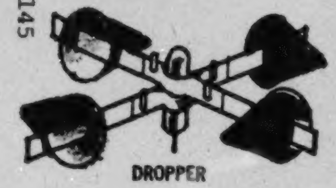
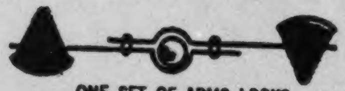




ONE SET OF ARMS LOOKS THIS WAY FROM THE TOP

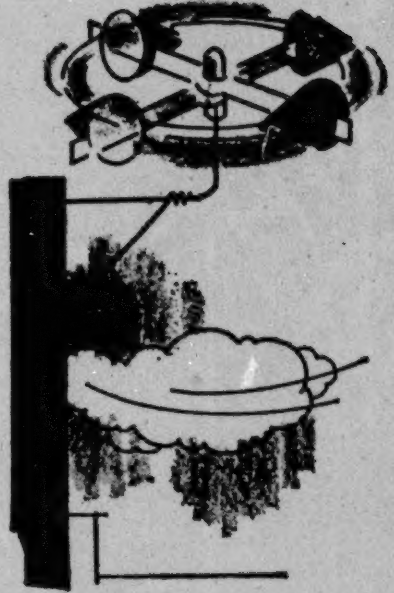
9. Slip the medicine dropper over the upright wire on the hanger and that's that. The wind will take care of the rest. Your anemometer will whirl rapidly when the wind is strong, slowly in a light wind. But how do you determine the wind speed?

10. Here is a rough rule for finding the wind speed: Count the number of turns in 30 seconds, divide by 5, and that will give you the wind speed in miles per hour. If you want to get a more accurate system by actually testing your anemometer, here's how to do it:

11. On a calm day, ask someone to take you for a ride in the car on a quiet road. Sit in the front with the window open (make sure your seat belt is fastened and the car door locked). Hold the anemometer out of the window and have the driver go at a steady 5 miles per hour.

As the car goes, count the number of turns in 30 seconds. Mark it down: 5 mph, 27 turns (or whatever it actually turns out to be). Then do the same thing at 10 mph and again at 15 mph and at 20 mph, each time writing down the numbers you get. From these figures you can make a graph.

Now you are ready to mount the anemometer outside or on the roof. Take everything outside—coat hanger, medicine dropper, and arm-and-cup combination—plus a hammer and some U tacks. Nails will do if you don't have any U tacks. Fasten the bent hanger to a pole, rod or fence post out in the open where the wind can blow against it.



COUNT THE NUMBER OF TURNS IN 30 SECONDS

WIND VANE

This familiar instrument is commonly called a weather vane, but it really tells wind direction. It is true, however, that the direction of the wind will often tell you something about the coming weather.

MATERIALS NEEDED:

Medicine dropper, milk carton, coat hanger, paper clips or staples (staples are better).

HOW TO BUILD IT

If you have built the anemometer, you will find this one quite simple because the parts are made the same way.

1. Make a coat-hanger bracket just like the one made for the anemometer.

2. Prepare the medicine dropper the same way.

3. Cut a double strip of paper from

WATCHING THE WIND

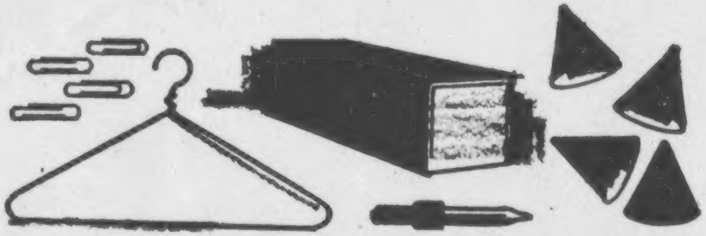
ANEMOMETER

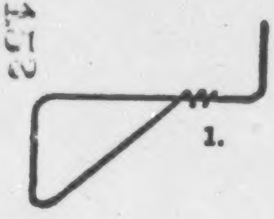
You can always recognize a weather station by its anemometer *(an-e-mom'e-ter)*, the wind speed indicator, spinning cheerily. It consists of 3 cups (some types have 4) mounted on arms that are free to spin. When the wind blows, it skims by the outside of each cup but is caught by the hollow inside, causing the whole thing to turn. The faster the wind, the faster the turning. The anemometer is electrically connected to a dial inside the weather station, showing the speed of the wind in miles per hour.

The anemometer for you to make is not nearly as elegant, but on the other hand you can build it in less than an hour, and the materials will probably cost nothing. It will be a very attractive part of your weather station.

MATERIALS NEEDED:

Wire coat hanger; milk carton; medicine dropper; 4 pointed paper cups; paper clips or stapling machine.



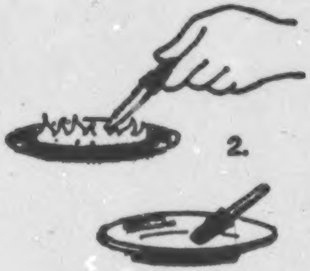


1.

HOW TO BUILD IT

1. Untwist the coat hanger. Break off the crooked ends. Then bend it into the shape shown in the picture.

2. Holding the medicine dropper by its rubber bulb, melt the glass tip over a gas flame or electric range. Turn the dropper as you heat it, so that it is heated evenly all around the tip. When you are through, the tip should be solidly closed. Then place it on a dish and allow it to cool for at least 5 minutes. Glass stays hot for quite a while and can give you a bad burn so be very careful.



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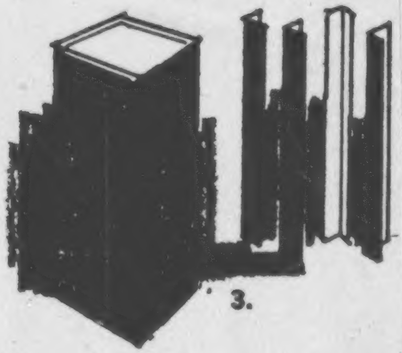

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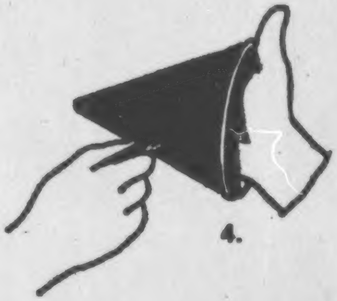


4.

3. While the dropper is cooling, you can start cutting the arms of the anemometer. These are made by cutting a straight line, top to bottom, about 3/4″ from the corner of the carton, and another line the same distance away on the other side of the corner. Cut 4 strips like this; one from each of the 4 corners of the milk carton.

4. With crayon, make a large colored circle on the underside of 1 paper cup. This will make it easier to count the number of turns that the anemometer makes in a minute.

5. Cut two slots, 3/4″ wide, in each of the paper cups.

6. Slip the folded paper strips into the slots in the cups, one strip to each cup.

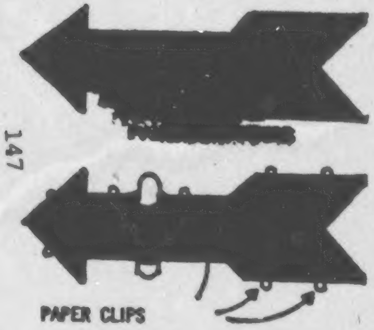
7. Touch the medicine dropper gently to see if it's still hot. If it is cool, take the rubber bulb off.

8. With paper clips or staples, fasten the arms and cups to the medicine dropper as shown on p. 20.

the corner of the carton, similar to the strips used for the arms of the anemometer, but this one should be 2" from the corner each way. In other words, this strip will be 4" wide and as long as the milk carton.

4. Cut this double strip into the shape of an arrow, as shown.

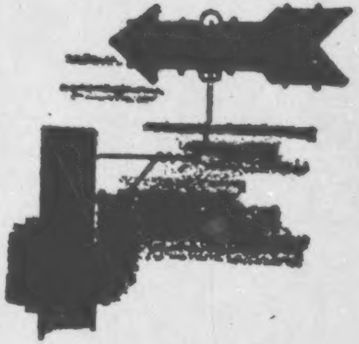
5. Push the tube of the medicine dropper between the two parts of the arrow, closer to the point of the arrow than to the tail. Fasten it in place with paper clips or staples.



6. With nails or U tacks, fasten the coat-hanger bracket to the post, above the anemometer and to one side.

Your wind vane is simple, but it will work quite well. It will point to the direction *from* which the wind is blowing, because the tail side of the arrow is larger than the point side and catches more wind.

As you keep daily records of wind direction, you will find that certain directions often bring certain kinds of weather.



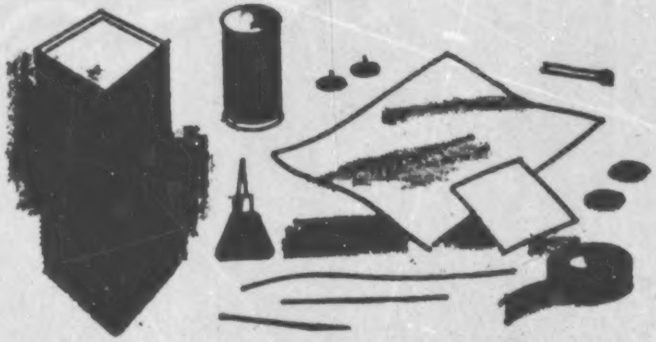
BAROMETER

The weatherman finds this the most useful of all his instruments. A barometer tells you the presure of the air—how heavily it presses. Cold air has more pressure than warm air, so an increase in pressure usually indicates the approach of weather that is cooler and drier. It is drier because cold air holds less water vapor than warm air.

A very accurate barometer is expensive, but you can get fairly good results with a homemade one. Here are directions for building a barometer out of scrap materials.

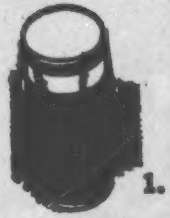
MATERIALS NEEDED:

A milk carton; an empty tin can small enough to fit into the carton; a small sheet of plastic (the kind used for making shower curtains, tablecloths, etc.) or a piece of a balloon; a paper clip; a needle; thread; nail polish or cement; a broom straw; a white card; cellophane tape; paper match; 2 thumbtacks; 2 pennies.



HOW TO BUILD IT

1. Cut a circle of plastic or balloon about 2" larger than the bottom of the tin can. Stretch the plastic over the open end of the can, neatly and without wrinkles, and fasten its edges to the side of the can with several layers of cellophane tape or a few rubber bands.



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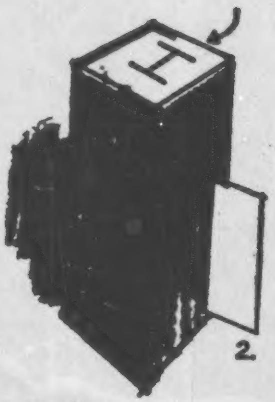

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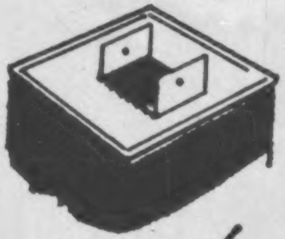

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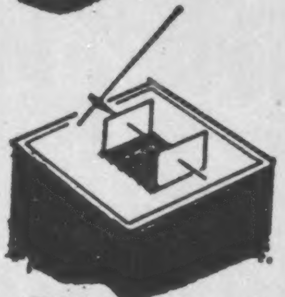
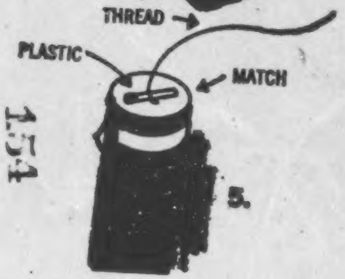




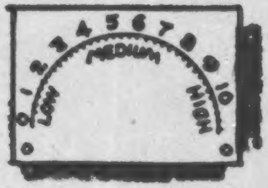
5.

2. Cut a door in the side of the carton and an H at the bottom.
3. Turn up the flaps of the H. With your needle, bore a hole in the center of each flap. The holes should be large enough to permit the needle to turn freely.
4. Cut a thin piece of broom straw about 3″ long and push one end through the eye of the needle. Fasten it with a dab of nail polish or cement.
5. Cut a piece of thread about 10″ long. Tie one end around a small piece of paper match. Then attach the piece of match to the center of the plastic sheet, using cellophane tape, cement or nail polish.
6. Draw a half circle on the card with the words *high, medium* and *low* and the numbers 1 to 10, as shown. Attach the card to the carton with thumbtacks.
7. Put the tin can inside the carton and pass the thread through the hole made by the flaps.
8. Push the needle and straw through the holes in the flaps, until the straw is near but not quite touching the card.
9. Wind the thread around the needle—over from the right side, twice around and over the edge of the carton. Tie the loose end to a paper clip and slip 2 pennies into the clip. Their weight will keep the thread taut. Set the broom straw straight up, pointing to the word medium.

HOW YOUR BAROMETER WORKS

The molecules of air in the can bounce around in all directions. Those near the top bounce against the plastic sheet. This would make the sheet bulge upward, but other molecules of air about the sheet are pushing it down, so the sheet stays level. But when the outside air becomes heavier and presses harder, the sheet will be pressed down a bit. When the outside air becomes weak, the sheet will be pushed up slightly by the air inside. These movements of the sheet cause the thread to move up or down and cause the needle to turn. The needle moves the broom straw pointer.

Your homemade barometer, if carefully built, will be fairly sensitive to changes in air pressure. If it goes dead after a few days, that may be because the plastic or rubber sheet is not quite airtight (some kinds leak air very slowly) or because you didn't do a really airtight job in fastening it to the can. In any case, don't expect to see violent motions of the pointer—an approaching front may move the pointer ¼″ to ½″ in a day.



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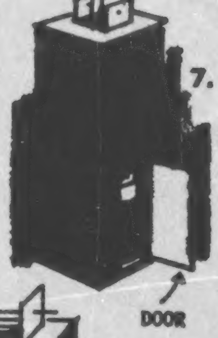

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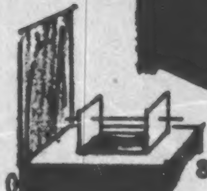

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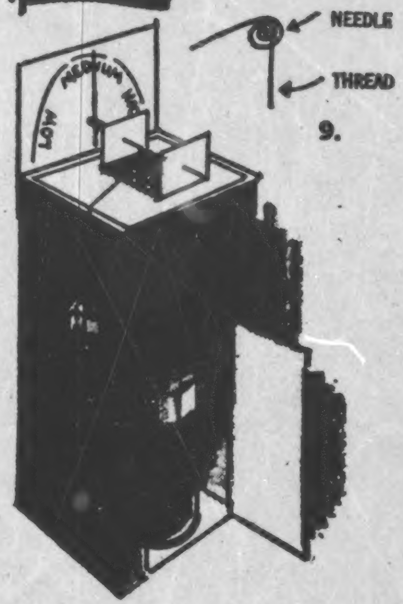

9.

SECOND EXPERIENCE LEVEL

Occupational Cluster: Hospitality and Recreation

Major Project: Travel Agent

Subject Matter: Language Arts, Social Studies, Mathematics, Science

Subject Matter Focus: Language Arts
- Handwriting Skills
- Correct Spelling
- Proper grammar and usage in oral and written work
- Improve listening and speaking skills
- Letter writing
- Writing descriptive paragraphs, composing riddles, and jingles
- Giving and following directions

Subject Matter Focus: Social Studies
- Interactions between people and environments
- Changing conditions and changing values
- Community workers in hospitality and recreation
- Working in groups
- Ways in which government helps people

Subject Matter Focus: Mathematics
- Addition and subtraction
- Introduction to calculator to compute mileage, distance, costs, etc.
- Measurement of time, money, length, and rate of speed
- Estimating
- Problem solving (multiple steps)
- Reading scale of miles on maps
- Charts and graphs

Science Concepts
- Climate changes and seasons
- Topograph
- Using natural resources and uses of environments
- Appreciate and enjoy ones' environment
- Introduction to photography (picture taking)
- Modes of transportation (review)

Career Development Concepts

Major Concept: (Self-development) Social, economic, educational, and cultural forces influence self-development.

Sub Concept: (Self-development) Changes in an individual influence his environment and changes in environment influence him

Sub Concept: (Attitudes and Appreciations) Specialized occupations result in an interdependent society.

Sub Concept: (Educational Awareness) Knowledge and skills in subject matter areas are helpful in occupational competence.

Teacher Goals:

1. Structure experiences for pupils to apply intellectual and social skills to the work of a travel agent.

2. Enlarge pupil awareness of the role of the travel agent in the total economy.

3. Provide the pupil with first-hand experiences in planning trips using various means of transportation.

Pupil Performances:

Language Arts and Social Studies

1. To use words related to tourism properly in conversation and writing.

2. To be able to give directions and lead a group through a tour experience.

3. To collect travel folders and examine them to see the value of printed materials.

4. To make up commercials that "sell" their dream trip and to verbally present it to the class.

5. To compose riddles about places to visit.

6. To see the importance and value of resource people in a community.

Science and Mathematics

1. To become aware of various climates, natural resources, and scenery available in the United States and its influence on travel.

2. To develop a slide presentation of a field trip with emphasis on science and the natural beauty of the surroundings.

3. To examine the various modes of transportation and be aware of the advantages and disadvantages of each

4. To calculate distances for long or short trips.

5. To work with time tables.

6. To learn to read maps

7. To work with metric measurement in traveling

Supplemental

1. To enjoy one's environment through walking and observing.

2. To work with a variety of art media and construct dioramas and other 3-D projects.

3. To develop posters with Bicentennial themes to encourage travel throughout the United States.

4. To make signs to place in the school to provide directions.

5. To compose and tape jingles.

Suggested Activities and Discussions

1. (Introductory Activity) Plan a tour through the school for parents. Divide the class into small groups assigning specific tasks (decided upon by teacher and students).

2. Collect travel folders dealing with many different places and modes of travel. After examining brochures, discuss where, when, how, and why people travel. Point out the difference in cost according to means of transportation, to distance, or to destination.

3. Poster project using the Bicentennial Celebration theme. Topics might include: travel then and now, vacation then and now, Gettysburg (or a special place) then and now.

4. Design a travel folder to describe the places and services offered by a travel agency. Include cost, transportation, accommodations, points of interest, etc. Pictures from old magazines can be used to "dress up" the brochure. Have the pupils sell their trip during the Language lesson.

5. Collect road maps from different states, timetables for bus, railroad and airlines. Then have the students plan a "Dream Trip" describing modes of transportation, rates of speed, distance covered and time elapsed. Compare students' plan with those of different travel agencies.

6. Make a neighborhood map. Have students locate their homes. Discuss the best way to get to school, most scenic way, most fun way, etc.

7. Provide the students with story problems so the students might calculate time and distance. Include some problems using metric measurement.

8. Walking Trip for nature study or points of interest in town.

9. Have students compose a jingle to sell a trip. Put them on a tape recording.

10. Make up a riddle book about the states. I am a large state

in the Southwestern part of the United States. Can you guess what I am?

11. Make three-dimensional projects for art showing points of interest in travel (beach, mountains, etc.) Discuss with students what materials can best be used to create scene.

12. Take a field trip to Allerton Park. Divide class into groups to plan food, calculate distance, gasoline, mileage, proper clothing, contact resource person there at the park, send thank-you note, take pictures, and tape recorder.

13. Discuss the fact that music goes with us as we travel (radio, group singing in the car).

14. Invite in a resource person, perhaps a Filling Station Attendant. Ask him to discuss with the class how he helps travelers.

Suggested Human Resources:

- Travel agent
- Tour Guide
- Policeman
- Souvenir Shop operator
- Resort operator or worker
- Traveler
- Bus Driver
- Motel Owner
- Park Ranger
- Pilot
- Filling Station Attendant or owner

Material Resources:

Filmstrips:

True Book of Social Studies (SVE) a-17 Airports and Airplanes
Learning to Use Maps (EC) c-7 Locating places on Maps
Lands of the Far East (EB) c-17 Hong Kong -- Crossroads of the Far East
Natl. Parks and Monuments of the United States (SVE) d-1 Yellowstone Natl. Park
For Elementary Social Studies (Filmstrip of the Month) d-11 Africa
Troll Associate Service, d-37 If you were born in Alaska
Transportation (SVE) e-10 Air Transportation, Passenger
    e-16 Water Transportation, Ocean Passenger
    g-38 If you were bown in Hawaii
    h-3 If you were born in Mexico
    h-19 California
    h-24 America the Beautiful

Records

33rpm -- Over the Ramparts We Watched
Folksongs-Walt Disney
Folksongs-Burl Ives

Occupational Floor Puzzle (Career Education)

Books

Bailey: Alaska
Bailey: Hawaii
Bailey: Illinois
Barr: This is My Country
Camerson: A Big Book of Real Trains
Carlisle: The True Book of Automobiles
Carpenter: Enchantment of America
Carpenter: California
Dalgliesh: America Travels
Epstein: Maps and Globes
Greene: A Trip on a Train
Lauher: The Mississippi
Leaf: Being an American Can Be Fun
Lenski: The Little Train
Lahsenz: National Monuments
Luhell: Pictures, Signs, and Symbols
McWilliams & Reisorf: Build a Highway
Tina: Alaska
Rachills: Our 50 United States
Rhodes: How to Read a Map
Roch: The West from A to Z

Talking Books

Leonard Discovers America

SECOND EXPERIENCE LEVEL

Occupational Cluster: Personal Service Occupation

Major Project: Waiter/Waitress

(Set up a classroom Snack Bar in order to sell, serve, and prepare foods for the public.) Introduction: It's mother's birthday. As a special treat, the family decides to take her out to dinner. Each family member considers this a treat. Many people contribute to the enjoyment of this outing.

Subject Matter: Language Arts, Social Studies, Science, Math

Subject Matter Focus: Language Arts

Handwriting, spelling, grammar, and usage; dramatization; listening and talking; following directions; remembering details; questioning and notetaking; discussion; interviewing and vocabulary development.

Subject Matter Focus: Social Studies

Communities need and workers' service; businesses provide services; contact with others (group planning and dependence upon one another). Values are gained from community work; technology in jobs produce change.

Subject Matter Focus: Mathematics

Addition and subtraction skills; multiplication readiness; measurement of money; place value; sets and fractions; using symbols and charts; problem solving; metric system.

Subject Matter Focus: Science

Collecting data, problem solving, drawing conclusions, reporting and observing, planning procedures, charting and recording, estimating, investigating and evaluating.

Career Development Concepts:

Groups outside of school influence an individual's personal development. Some work may not become a person's life-long occupation.

Teacher Goals:

1. Help pupils relate academic and personal relations skills to the work of the waiter/waitress.

2. Increase the pupils' awareness of social groups and their purpose and interactions.

3. Guide the children to understand that sharing a meal (or food) draws people together in groups. The waiter/waitress helps to reinforce this group.

4. Provide opportunities for children to try out occupational tasks related to waiter/waitress work.

5. Develop skills needed to plan monetary activities related to waiter/waitress work.

6. Build awareness of detailed planning needed to perform together in a large group project.

7. Bring creativity and the arts into a relationship with careers in personal service occupations.

Pupil Performance:

1. To develop an awareness of the waiter/waitress career through role playing and dramatization.

2. To become aware of the importance of good manners in personal service occupations.

3. To use vocabulary terms properly which are related to restaurant workers when writing or speaking.

4. To become familiar with the techniques of good planning when undertaking group projects.

5. To construct menus and advertising materials for a pupil project.

6. To evaluate class project.

7. To show the importance of product promotion.

8. To work with money to make change during project work.

9. To become familiar with newspaper ads and the value of comparing prices.

10. To learn to use the various measurements and symbols used in cooking (metric as well as standard).

11. To observe changes that take place when certain substances are combined and cause chemical reactions.

12. To experiment with the various media of art in advertising (illustrations, jingles, posters).

13. To express one's ideas on the occupations related to the personal service careers through the art of role playing and dramatization.

14. To learn the necessity of good health habits working with food.

Suggested Activities:

1. Students will put on a puppet show (dress them appropriately as waiter/waitress). They will pretend that they are interviewing the puppet on television. One child will manipulate and speak as an interviewer. Others will manipulate and speak for waiter/waitress puppets. The interviewer asks questions concerning the work, dress, and responsibilities of waiter/waitress.

   Suggested questions:
    1. Ask the waiter/waitress to tell about his/her work.
    2. Discuss the type of clothing and equipment used in work.
    3. Who can be a waiter/waitress?
    4. What should you enjoy or like if you plan to work as a waiter/waitress?
    5. Why do some people choose this kind of work?
    6. What kind of training is needed to do it?
    7. How important is cleanliness in personal service?
    8. Discuss the necessity of making the customer comfortable and "always right."
    9. What do we do when accidents occur?
    10. How do you take orders?
    11. What do you need to know in order to do it accurately and quickly?
    12. How important is tipping and for what reason is it done?

2. Interview a restaurant owner-operator (manager).

3. Write a story (real or imaginary) about a funny thing that happened to a waiter/waitress.

4. Write a story about a helpful deed performed by a waiter or waitress.

5. Plan Tic-Tac-Toe Game for waiter/waitress (Use do's and don't's of job to fill in squares).

6. Begin major project by making up a tentative menu for Snack Bar. Try to estimate and establish prices. Bring in newspaper ads to note prices. Discuss differences found in restaurants that serve full meals and those that specialize in short orders.

7. Survey school to find out what the students would like to have served in a Snack Bar at School.

8. Learn the correct way to set tables and serve food by role playing.

9. Plan posters to promote the sale of food and place in strategic locations around school. Prepare a flyer or hand bill advertising products to be sold.

10. Discuss the benefits found in prepared mixes and following recipes from "scratch".

11. Have students practice proper serving techniques by bringing cookies to class to be served with afternoon milk.

12. Let students draw up a floor plan for Snack Bar, noting conveniences, availability, and customer comfort.

13. Divide into committees and let students decide which group they wish to work with on organization of Snack Bar.

14. Visit a restaurant and interview (in small groups) the people who work there (cook, waiter, dish washer, owner, customer). Let the students order from the menu at the restaurant.

15. Make a field trip to the grocery store to purchase food needed for Snack Bar.

16. Make up bill of fare and work on math problems needed to compute bills (use real order pads). Solve math problems related to money.

17. Discover how grouping into sets makes "order taking" easier.

18. Learn the system of symbols to be used in reading recipes and writing or converting to metric measure.

19. Learn about use of charts to determine amounts to use in food preparation. Let students learn value of estimating (use parts of pounds, etc.)

20. Prepare the foods to be sold in Snack Bar. Possible menu suggestions might be: popcorn, finger jello, fudge, suckers, Rice Krispies treats, chocolate chip cookies, brownies, kool-aid. (Special attention must be given to questionnaire circulated earlier.)

21. Plan for profits in project and allow for group decisions as to how to spend money.

22. Discuss chemical reactions that take place when baking or cooking food.

23. Become aware of nutritional value found in some foods.

24. Make a nutrition chart if students show interest.

25. Make a bulletin board as a group activity stressing nutrition.

26. Practice good health habits in preparing and operating Snack Bar.

27. Trace food raw-materials sources as an extension project. (could be an individual choice option)

28. Make posters using multi-media so that posters can be seen by all prospective customers.

29. Play a tape (introduce with music jingle like McDonalds' song) to advertise Snack Bar. Play in school hall.

30. Make up a recipe Rummy Game.

31. Place all prepared materials for role playing in restaurant Occupac.

32. Pantomime various occupations related to personal service occupations.

Suggested Human Resources:

- waiter/waitress
- chef
- cashier
- McDonald's employee
- bus boy
- hostess
- restaurant owner/manager
- short order owner/manager
- waiter captain
- dish washer
- cook

Material Resources:

Books

- Chalmers: I Had a Penny
- Elkin: The True Book of Money
- Lindquist: Stone Soup
- Pristor: Pop Corn and Ma Goodness
- Padendorf: Food is For Eating
- Welch: Pudding Pie
- Wing: Ten Pennies For Candy
- Zion: Dear Garbage Man
- Zim: YourStomach and Digestive Tract

Talking Books

- Here and There Series
- The Day Joe Went to the Supermarket
- Bread and Jam for Frances

Filmstrips

b-1 Finding Out How Foods are Used in Your Body
b-46 Food for Living Things
d-2 Story of Bread
d-3 Story of Fruits and Vegetables
d-29 People Who Work While You Sleep
d-45 Health Habits
h-33 Story of Milk
h-35 Story of Meat
Learning about Food (with record)

Records

Good Manners Through Music

Study Prints

SP123 Supermarket Helpers
SP122 Dairy Helpers

Filmstrips with tapes

612-3 Job Opportunities in a Restaurant
Who's Cooking, Targo?
Where's the Ice Cream?

SECOND EXPERIENCE LEVEL

Occupational Cluster: Public Service Occupations

Major Project: Librarian

Subject Matter: Language Arts, Social Studies, Mathematics, Science

Subject Matter Focus: Language Arts Concepts
Following directions
Library skills
Dictionary skills (locating information)
Note taking and interviews
Oral reports
Alphabetical order

Subject Matter Focus: Social Studies Concepts
Community workers
Ways in which the government helps people
Working in groups
Community reflects the assumptions and values of its people

Subject Matter Focus: Mathematics
Addition and subtraction facts through 20
Multiplication readiness
Measurement of time and money
Estimating numbers and money

Subject Matter Focus: Science
Changes do occur
Elements play a part in the storage of things

Career Development Concepts:
Major concept: Self development. An understanding and acceptance of self is important
Sub Concept: (Self development) An individual's feelings relative to happiness, fear, anger, loneliness, etc. are diverse.
Sub Concept: (Attitudes and Appreciations) Completion of a worthwhile task has value for the worker and for society.
Sub Concept: (Career Information) Technological, economic, social, and political factors influence the supply and demand of jobs.

Teacher Goal:
The student will appreciate what the librarian does and will learn to respect materials which belong to others.

Pupil Performances:
Language Arts and Social Studies

1. To organize the classroom materials so that there will be ease in the students' use of materials.

2. To visit a variety of libraries (assigning small groups to visit, interview, and report back to class).

3. To compile lists of rules and regulations to be used in classroom library.

4. To write and illustrate book on any topic which is of interest to the student.

Science and Mathematics:

1. To select books to be placed in a classroom library using a book fund and profits from Snack Bar Project.

2. To work with charts and graphs when buying, classifying, and coding books.

Suggested Activities:

Language Arts and Social Studies

1. Introduce the idea of organizing the classroom library by discussing the benefits of having materials readily available.

2. Use the wall charts as a source of information.

3. In order to stress this point, play a Scavenger Hunt Game. Provide the students with a variety of clues to see if they can locate items placed somewhere on the library book shelves. The students should then be able to discuss reasons and ideas for organizing and classifying materials in a center.

4. Form small groups to be in charge of selecting, ordering, coding, and classifying books, films, recordings, pictures, charts, collections, and magazines.

5. Devise a means of organizing the materials (alphabetizing, categorizing) according to title, author, or subject.

6. Set up a schedule for operating the library and assigning duties.

7. Each student will be responsible for a story session. He may present the story by using any means he desires (reading tape recording, memorizing, re-tell in his own words, dramatizing, diarama, or play acting). •These stories may be shared with other classes.

8. Present the idea that a library is a store house of information. This point can be illustrated by letting each student become a source of information.

9. Compile lists of rules and regulations for caring for books and conduct in a library.

10. Encourage the children to share some of their thoughts and ideas by writing stories and placing them in a shape book. "What's My Book?"

11. Play a quiz show in which a student is asked questions by his classmates which can be answered by "yes" or "no" to gain information to learn the title of the students favorite book. The rules and regulations can be patterned after "What's My Line?"

12. An end of the year field trip to the public library might be used as a culminating activity. This visit will help them understand the functions of the public library, what it offers the students, and the interest the librarian has in the students.

13. Invite speakers into the classroom from various careers related to Public Service Occupations. Contact such people as poet, illustrator, author, curator, newspaper employee, etc. Use the human resources to point out the fact that there are many kinds of libraries (personal, public, private, museums).

Mathematics and Science Activities

1. Budget money from Snack Bar Project profits and classroom book fund to order reading materials to be placed inthe classroom library. Some time will be spent compiling lists of materials to be ordered. Provide the students with catalogs so they will be able to list all the information necessary to fill out a requisition.

2. Charts should be constructed so that no one area of reading (mystery, animals, fantasy, etc.) is neglected or overloaded.

3. Compile an inventory so that a record will be made and filed for future reference.

4. Study the etomology of a book.

5. Discuss the effects of insects, weather conditions, aging, etc. and why it is necessary to preserve books. Bring in an antique book.

6. Bind shape books using tape or stitching.

Supplemental Activities:

1. Ask each student to illustrate his idea of a typical librarian. When complete, have a group discussion as to the reasons why they used their specific characteristics.
2. Have each student bring in a T-shirt. Using embroidery markers have each student illustrate his favorite book.
3. Pantomime what you like to do best at the library.
4. Play "Charades" using book titles.
5. Make a book envelope to carry books safely.

Suggested Human Resources:

- Librarian
- Library clerk
- Author
- Illustrator
- Newspaperman
- Curator
- Book sales representative
- Poet
- Printer
- Mobile library bus driver

Material Resources:

Filmstrips

Using Good English (SVE)
a-15 Letter Writing for a Reason
a-16 Making Oral and Written Reports
Your Dictionary and How to Use it (SVE)
c-34 Make Alphabetizing Work For You
c-35, 36 First You Find It: Then You Define It
Reading - Scott, Foresman & Co.:
e-20 Beginning Sounds
e-21 Fun With Words
e-22 Letters and Sounds
e-23 Rhyme Time
e-38 Thumbelina
e-39 The Fisherman's Wife
e-40 Mr. Vinegar
e-41 The Three Billy Goats Gruff
e-42 The Gingerbread Boy
e-43 The Pied Piper
e-44 The Animal Musicians
e-45 Change About
e-46 Jack and the Beanstalk
e-47 Cinderella
e-48 Puss in Boots
e-49 Lazy Jack
miscellaneous stories:
f-27 Snow White and the Seven Dwarfs
f-28 The Vikings

f-29 Musicians of Bremen
f-30 The Elves and the Shoemaker
f-31 Dr. Doolittle - The Man Who Talks with Animals
f-32 Old McDonald Had a Farm
f-33 The Straw Ox
f-34 Thumbelina
f-35 Adventures of Paul Bunyan
f-36 Johnny Appleseed
f-37 Heidi

Filmstrips with records

Rev. Dr. Martin Luther King

Records

The Best in Children's Literature
Classics for Children Vol. I, II
Story of the Grasshopper and the Ants
Sleeping Beauty
Uncle Remus Stories
Winnie the Pooh and the Honey Tree
Story and Songs of Black Beauty

Talking Books

Set I and II (Scott, Foresman, & Co.)

Additional Free Resources for the Four Clusters

Ask any Forester, Society of American Foresters,
1010 Sixteenth St., Washington, D.C. 20036

American Society of Agricultural Engineers,
2950 Niles Rd. St. Joseph, Mi. 49085
The Profession with a Future, The Quest for Plenty

Careers in Radio, Careers in Television
National Association of Broadcasters, 1771 North St.,
Washington, D.C. 20036

A Career for You in Wildlife Conservation
The Wildlife Society, 3900 Wisconsin Ave., Washington, D.C.

The Environmentalist, National Environmentalist Health
Association, 1600 Pennsylvania Ave., Denver, Colorado 80203

Careers in Water Pollution Control, Water Pollution Control
Federation, 3900 Wisconsin Ave., Washington, D.C. 20016

THIRD EXPERIENCE LEVEL

Occupational Cluster: Marine Science

Major Project: Diver

Imagine a world under the sea where you could search for old buried treasure as well as find new treasures of minerals, food, and space.

For as long as man has lived upon the earth, he has been diving into the sea. At first these were only short dives for he could only hold his breath a short time. Eventually equipment was developed which allowed divers to stay beneath the surface for a greater length of time.

The sea has always been important to man but today it is vital to look at the entire sea -- water, bottom, animals, nutrients, currents, pollution, and minerals.

Marine Science Careers:

- marine geophysicist
- pot or trap fisherman
- undersea mineral extractor
- dredge operator
- marine biologist
- fish culturist
- salvage diver
- dock worker
- marine architect
- marine engineer

Career Development Concepts:

Dimension: Coping Behavior
Major Concept: Individuals can learn to perform adequately in a variety of occupations and occupational environments.
Sub Concept: Several skills may be required to perform a given task.
Sub Concept: Performance requirements for a job may vary with the work setting.

Dimension: Decision Making
Major Concept: Life involves a series of choices leading to career commitments.
Sub Concept: Decision making involves risks.

Dimension: Lifestyle
Sub Concept: Leisure-time activities and interests may lead to a career, and one's career may, in turn, affect the amount and use of leisure time

Dimension: Self-development
Sub Concept: There are certain physical, social, and emotional characteristics which make an individual unique.

Dimension: Educational Awareness
Sub Concept: Career-oriented learning may take place in school or out of school.

Dimension: Attitudes and Appreciations
Sub Concept: Specialized occupations result in an interdependent society.

Subject Matter: Math

Subject Matter Focus: graphs, weighing, measurement, code, money, time, addition, subtraction, temperature.

Teacher Goals:

Lead the children to understand that most tasks require a combination of simple skills.

Pupil Performances:

1. Students will learn how to read and make graphs.
2. Students will be able to compare weights and pressure of objects in and out of water.
3. Students will be able to measure water related activities.
4. Students will be able to code and decode.
5. Students will use and compare money of different countries.
6. Students will be aware of the monetary cost involved in this occupation.
7. Students will be aware of the importance of accuracy in time telling.
8. Students will realize the necessity of accuracy and speed of basic addition and subtraction facts.
9. Students will be able to read thermometer in aquarium.

Suggested Math Activities:

1. Teach basic skills by fishing game. Put the problems on fish cut-outs.
2. Teach measuring concepts. Tell the number of cups, quarts, and gallons of water in the aquarium. Measure in the metric system.
3. Reading thermometer in an aquarium.
4. Make graphs of: water temperature at various depths
   life forms at various sea levels
   comparison of fish size and categories
   length of time one can hold his breath
   ocean currents
5. Charts: to show variety and meanings of ocean colors
6. Using standard and metric measuring to convert fathoms to feet, miles, etc.; knots to m.p.h.
   1 fathom = 6 feet - 1.8288 meters
   knots = 6,076.11549 feet
   league = 3 miles

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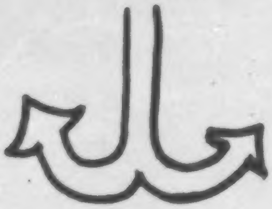
7. Measure fish pictures in standard and metric units.
8. Decoding addition and subtraction math game.
9. Coordinate math game (see example)
10. Treasure Chest full of coins - discuss coins of various countries. Children can bring and make examples.
11. Using a Diving Equipment catalogue, compute cost of outfitting a diver.
12. Read the second hand for timing of breathing activities (10-15 sec.)
13. Scott Foresman Math Book 3 (1975) p. 123 and 110
14. Deep Sea Diver Game (see example)
15. Bulletin Board: HOOKED ON GOOD WORK



Math Discussion Questions:

1. How does a diver use Math in his profession?
2. Discuss what causes temperature variation.
3. Discuss the monetary value of coins from other countries.
4. Where are most sunken ships found?
5. Discussion of money of different countries.
6. Is the satisfaction commensurate with the cost of diving and the preparation for this career?
7. Discuss the origin of thermometers.

Subject Matter: Language Arts

Subject Matter Focus: vocabulary terms, homonyms, synonyms, communication, sentence writing, reference materials, literature, creative writing

Teacher Goals:

Language may be ordinary English, but often special images and other vehicles of expression are used.

Pupil Performance:

1. Students will be exposed to vocabulary involved in Marine Science.
2. Students will develop and use a method of underwater communication.
3. Students will be able to state and write sentences in proper form.
4. Students will advance their knowledge of Marine Science through use of reference materials.
5. Students will be exposed to various types of literature pertaining to Marine Science.
6. Students will advance their skills in creative writing.
7. Students will use homonyms and synonyms.

Suggested Activities:

1. How dolphins can help man (Scott Foresman Language and How to Use It Book 3, p. 13-14.)
2. Make crosswork puzzles to learn technical vocabulary.
3. Write thank you notes expressing appreciation to resource person.
4. Use role playing - "Sometime in the Future on Earth".
5. Discuss interviewing techniques - how to ask good questions.
6. Communication - design a form of communication for underwater messages. Can be extended into other wordless means of communication (braille, morse code, international flag code, sign language, etc.)
7. Related literature to explore:
   Myths and Legends of the Ages, French Marion: "Sinbad the Sailor", p. 216; "Ali Baba", p. 227; "The Merchant of Bagdad", p. 238
   Time for Poetry, Arbuthnot, Mary Hill: "Boats", "Ferry Boats", "Sea-Fever", "Whistles", "A Sea-Song from the Shore", p. 74-75.
8. Reporting techniques for underwater life:
   - a. Believe it or not (strangest fish)
   - b. Fish America Pageant (Best Tasting, Most Dangerous, Prettiest Coloring)
9. Make up a story about living at the bottom of the sea.
10. Bleach Bottle Game - vocabulary games.
11. Fish stories - would you believe?
12. ME in 1989 -- what will you be? where will you be? Who will you be? Why?

Language Discussion Questions:

1. Discussion of early communication methods.
2. Discussion of no-verbal methods of communication.
3. Do you think there would be a specialized vocabulary for this occupation?
4. What would some of the vocabulary be?
5. Discuss the origin of the first words. What might some of the first words have been?

Subject Matter: Social Studies

Subject Matter Focus: history of diving, locations (California and Israel), interdependence, history of underwater vessels.

Teacher Goals:

A person's membership in a group as well as himself.

Pupil Performances:

1. Students will research the history of diving and underwater vessels.
2. Students will see the relationship of various occupations.
3. Students will see that lifestyles within communities differ.

Suggested Social Studies Activities:

1. Clay vessels - see if they will float.
2. Study ecology as applied to marine science.
3. Create a physical map of the ocean floor (salt and flour).
4. Sand painting.
5. Mural depicting marine life.
6. Seascapes done with finger paints.
7. Study scuba diving equipment - drawings and reports.
8. Murals and collages - having to do with marine life.
9. Make individual masks, fins, snorkels, etc.
10. Scrap books and reports on how diving equipment and vessels have changed.
11. Make drawings and reports showing how divers have helped with construction of various structures (bridges, docks, oil derricks, tunnels, telephone cables).
12. Make a U.S. map showing occupational areas.
13. Make a field trip tp pool to observe equipment use.
14. Make a four-part occupation shield.

Discussion Questions:

1. Discuss the difference between recreational and commercial diving.
2. What interests must you have to become interested in Marine biology?
3. What educational requirements must you have to be a diver?
4. What are the disadvantages of this occupation?
5. What are some of the endangered species under the sea?
6. Would you be willing to make your home in the area this occupation would require?
7. Where would you need to live and work to be a diver?
8. What do you suppose would be the most important or exciting part of a diver's work?
9. Does a diver need anyone else to help him in his work?
10. Can you help anyone by being a diver?

Subject Matter: Science

Subject Matter Focus: sound, air, plant and animal life under water, salt and fresh water, pressure, elements, ecology, physical characteristics needed.

Teacher Goals:

Help the children identify Science related activities the diver must be able to perform.

Pupil Performances:

1. Students will be aware of the characteristics of sounds underwater.
2. Students will be able to compare water and air pressure.
3. Students will be able to categorize plant and animal life.
4. Students will be aware of the physical qualities needed for this occupation.
5. Students will be able to distinguish the characteristics of salt and fresh water.

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6. Students will see the results of pressure on various objects.
7. Students will be able to identify the various elements of the sea and their effects.
8. Students will be aware that marine life has been seriously affected by water pollution.

Suggested Activities:

1. Collect and display sea shells and sea life.
2. Craft work using items related to the ocean (example - shells, driftwood, sand, plants, barnacles).
3. Timeline - how the sea has changed.
4. Study salt factor in the ocean.
5. Make a sound bubble.
6. Discuss and study the endangered species (whale) Project Jonah, Box 476, Bolinas, California, 94924.
7. Try the various breathing techniques used by divers. Try holding your breath for various lengths of time (5-10-15 secs.) Try breathing through a straw.
8. Wearing a rubber glove on one hand, check how various water temperatures feel.
9. Compare the use of fins on fish and when humans wear them.
10. Wearing a woman's swimming cap, check the change in sounds. Compare which is more distinct.
11. Discuss the various health requirements needed for diving.
12. Make charts and murals showing animal and plant life in fresh and salt water.
13. Relationship of salt and fresh water experiment (see example).
14. Fish mobile of various types found in fresh or salt water.
15. Make drawings and reports about the types of instruments and scientific equipment useful under the sea.
16. Air pressure experiment: Today's Basic Science, Harper & Row, p. 26.
17. Explanation of how fish breathe: Today's Basic Science, Harper & Row, p. 46 and 48.
18. Discussion and charts of the Water Cycle: Today's Basic Science, Harper & Row, p. 116-117.
19. Breathing information and experiments: Today's Basic Science, Harper & Row, p. 142-147.

Discussion Questions:

1. Discuss water pollution problems.
2. What type of physical characteristics are needed to be a diver?
3. Discuss the elements of the ocean (living, plant and chemical).
4. Why is the ocean water salty when the streams coming into it are fresh water?
5. What is it like under the ocean?
6. Can people live and work under the ocean?
7. Would you like to care for animals and plants from under the ocean?

Suggested Human Resources:
Champaign County Rescue Operations (Police)
Scuba Diving Club (Champaign) University of Illinois
Bud Maynard (Farmer City Pool)
Normal Pet Shop (aquarium)
Coast Guard (East Peoria)
Fish Hatchery (Clinton)
State River Conservationist
Coast Guard or Navy Recruiter
Clinton Y (scuba diving classes)
Delores Knee (scuba diving)
Clinton High School principal (diving)

Suggested Material Resources:

1. Sea Food Companies (free information)
2. The Society of Naval Architects and Marine Engineers, 74 Trinity Place, New York, 10006.
3. Preparation for a Career in Fish Conservation, Dept. of the Interior, Bureau of Sport Fisheries & Wildlife, Washington, 20040
4. Careers in Water Pollution Control, Water Pollution Control Federation, 3900 Wisconsin Ave., Washington, D.C., 20016.

Books (Mansfield Learning Center)

Berger, Oceanography Lab
Carlisle, Norman & Madelyn, About Submarines
Carter, Katherine, The True Book of Oceans
Dean, Anabel, Men Under the Sea
Fenten, D.K., Harvesting the Sea
Hutchinson, The Sea andits Mysteries
MacCline, Robert, Treasures in the Sea
Phleger, F. & M., You Will Live Under the Sea
Scharff, Robert, The How and Why Wonder Book of Oceanography
Shannon, Terry & Payyant, Man in the Sea Program
Sherman, Diane, You and the Ocean
Waters, John, What Does an Oceanographer Do?

Filmstrips (Mansfield Learning Center)
SVE - side 1: Water Pollution - A Complex Problem
side 2: Solid Waste - A New Pollutant
Filmstrip of the Month: The Seas About Us
SVE - Plant and Animal Life Under the Sea
Educational Activities, Inc., record & 2 filmstrips: Oceanography
623 Tu - The Tugboat Has a Job

Books (Franklin Learning Center)
Bethers, Ray, What Happens in the Sea?
Blough, An Aquarium
Carter, Katherine, The True Book of Oceans

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Golden, Augusta, The Bottom of the Sea
Johnson, Robert, Men Who Work and Explore Under the Sea
Knopf, Alfred, Lobstermen
May, Julian, The Land Beneath the Sea
Norris & Watson, The Whale Hunt
Schaffert, The Aquanauts

Filmstrips (Franklin Learning Center)
a-27 Tropical Fishes
b-28 Some Water Animals
c-20 Japanese Fishermen
c-37 Animals of the Sea & Shore
c-39 Oceans
d-34 Fishing for Fun and Food
e-37 Low Tide at the Beach
g-32 Water, Water Everywhere
g-33 Plant Life in the Sea
g-34 Animal Life in the Sea
g-35 How the Sea Helps Us

Study Prints
sp116 Familiar Water Fish
sp166 Small Animals of Sea and Shore
spa12 The Fishes

Miscellaneous Items:
Survey Sea Life Collection
Air Pressure Science Kit
Sound Science Kit
Sounds We Hear (set of records & pictures)
Fisheries As a Profession: A Career Guide for the Field of Fisheries Science, American Fisheries Society, 1319 18th St., Washington, D.C. 20036

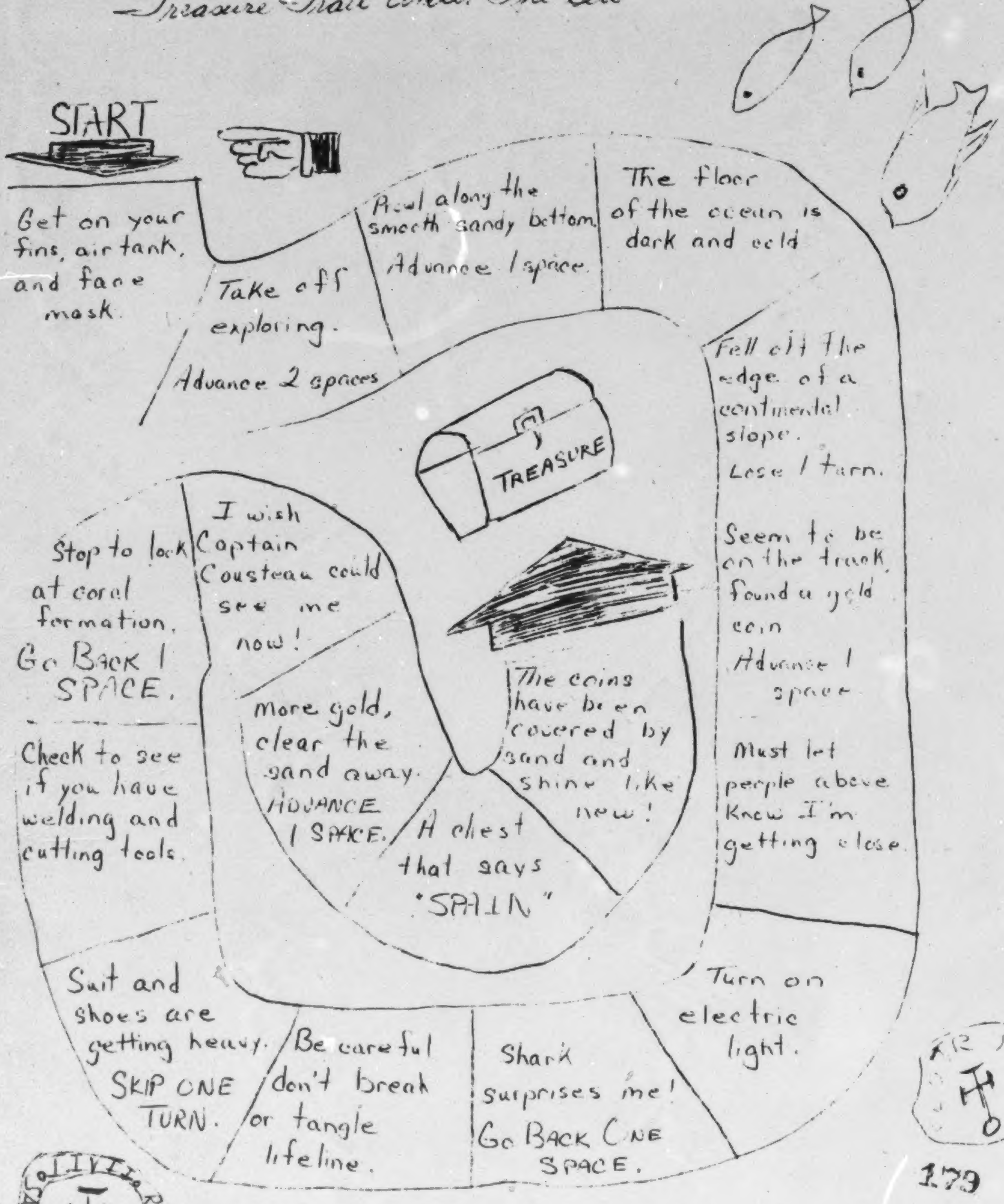
Record: Stories & Songs About the Sea
Sinbad the Sailor -- Ali Baba and the 40 Thieves
Paul Bunyan and Other Tall Tales, Old Stormy

Suggested Music Activities:
"Anchors Aweigh"
"Blow the Man Down"
"By the Sea"
"Asleep in the Deep"
"Row, Row, Row Your Boat"
"Down By the Riverside"
"The Sea, The Sea, The Beautiful Sea"
"There's a Hole in the Bottom of the Sea"

Suggested Physical Education Activities:
Breathing exercises
Pool - diving

SPINNING GAME:

Treasure Trail Under The Sea



START

Get on your fins, air tank, and face mask.

Take off exploring.

Advance 2 spaces

Prowl along the smooth sandy bottom.

Advance 1 space.

The floor of the ocean is dark and cold

Fell off the edge of a continental slope.

Lose 1 turn.

Seem to be on the track, found a gold coin

Advance 1 space

Must let people above know I'm getting close.

Turn on electric light.

Shark surprises me!

GO BACK ONE SPACE.

Be careful don't break or tangle lifeline.

Suit and shoes are getting heavy.

SKIP ONE TURN.

Check to see if you have welding and cutting tools.

Stop to look at coral formation.

GO BACK 1 SPACE.

I wish Captain Cousteau could see me now!

more gold, clear the sand away.

ADVANCE 1 SPACE.

A chest that says "SPAIN"

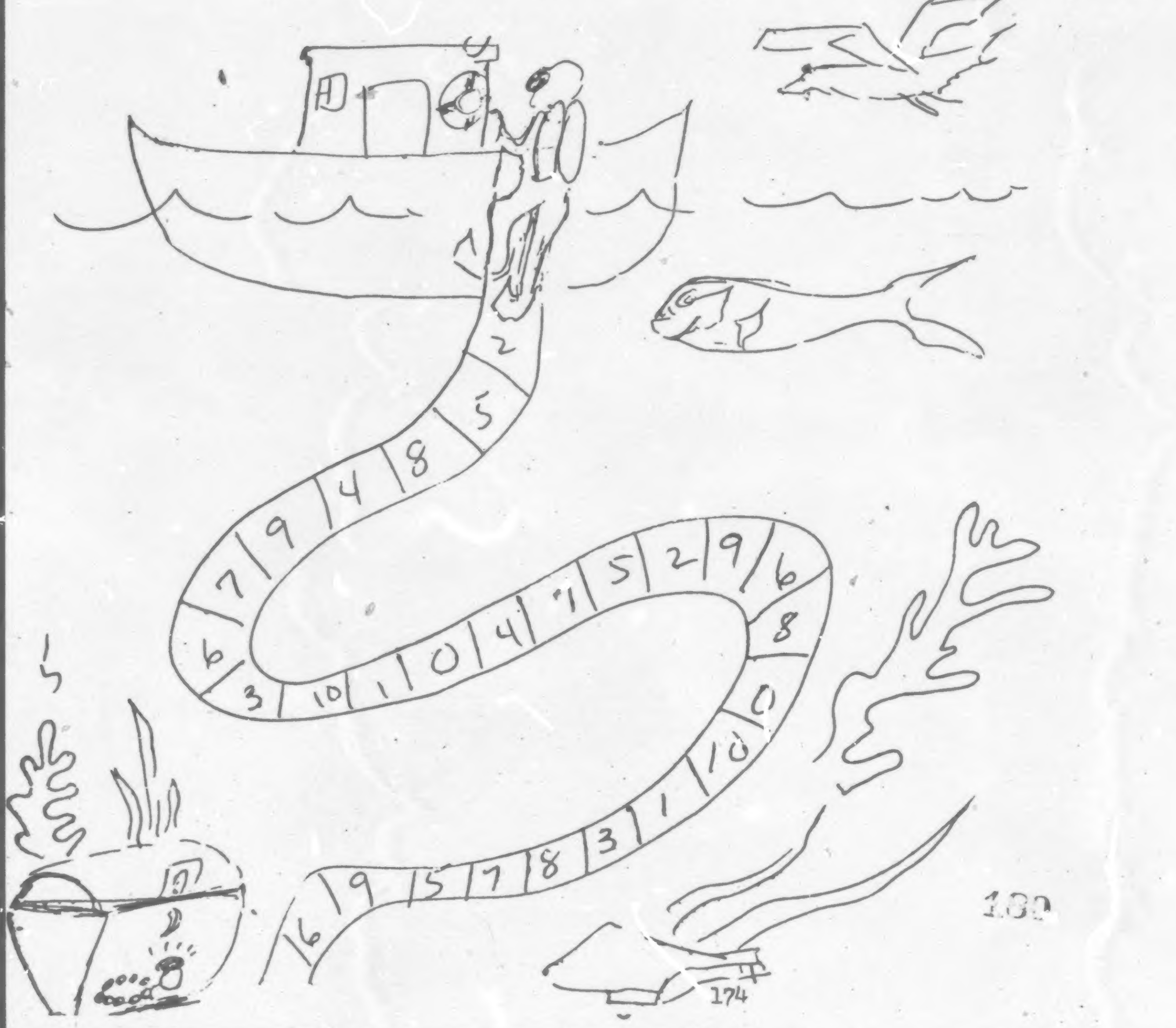
The coins have been covered by sand and shine like new!

Deep Sea Diver (addition & multiplication) 2-4 players

Preparation: Make a playing board with pictures of a boat, rope ladder, sunken treasure, and underwater creatures and plants on a piece of 22" X 28" poster board. Label each rung of the ladder with one of the numerals 0 through 10. Cut 10 diving helmets from poster board. Write one of the numerals 0 through 9 on the back of each. Some small pieces of childrens or costume jewelry are needed. Make a key so players can check answers during the game.

Directions:

1. Put the helmets face down on the boat and the jewelry on the treasure chest.
2. The first player draws a helmet from the boat. He multiplies (or adds) the number named on it by each number named on the ladders rungs. If he reaches the bottom of the ladder he gets to take a piece of jewelry. If he gives the wrong answer he must wait for another turn.
3. Play continues with players taking their turns in order.
4. The winner is the player who gets the most pieces of jewelry.



MATH

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
A	U	D	H	N	T	V	O	R	E	S	F	C	M	I	P		

10 -6	3 -2	5 +2	8 +2
4	1	7	10
H	A	V	E

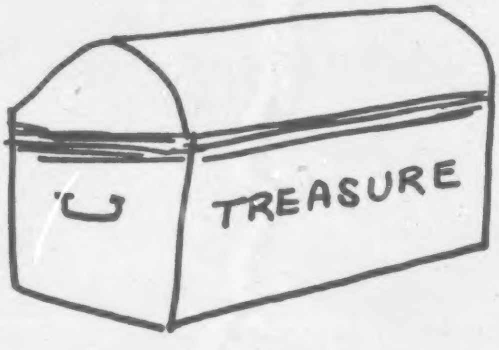
6 +6	9 -1	2 +0	3 +2	7 -4
12	8	2	5	3
F	O	U	N	D

4 +2	6 +3	5 +5	5 -4	7 +4	8 -6	5 +4	7 +3

7 +6	4 +4	9 +5	8 +2

5 +1	5 +3

8 3	2 2	7 8	9 7



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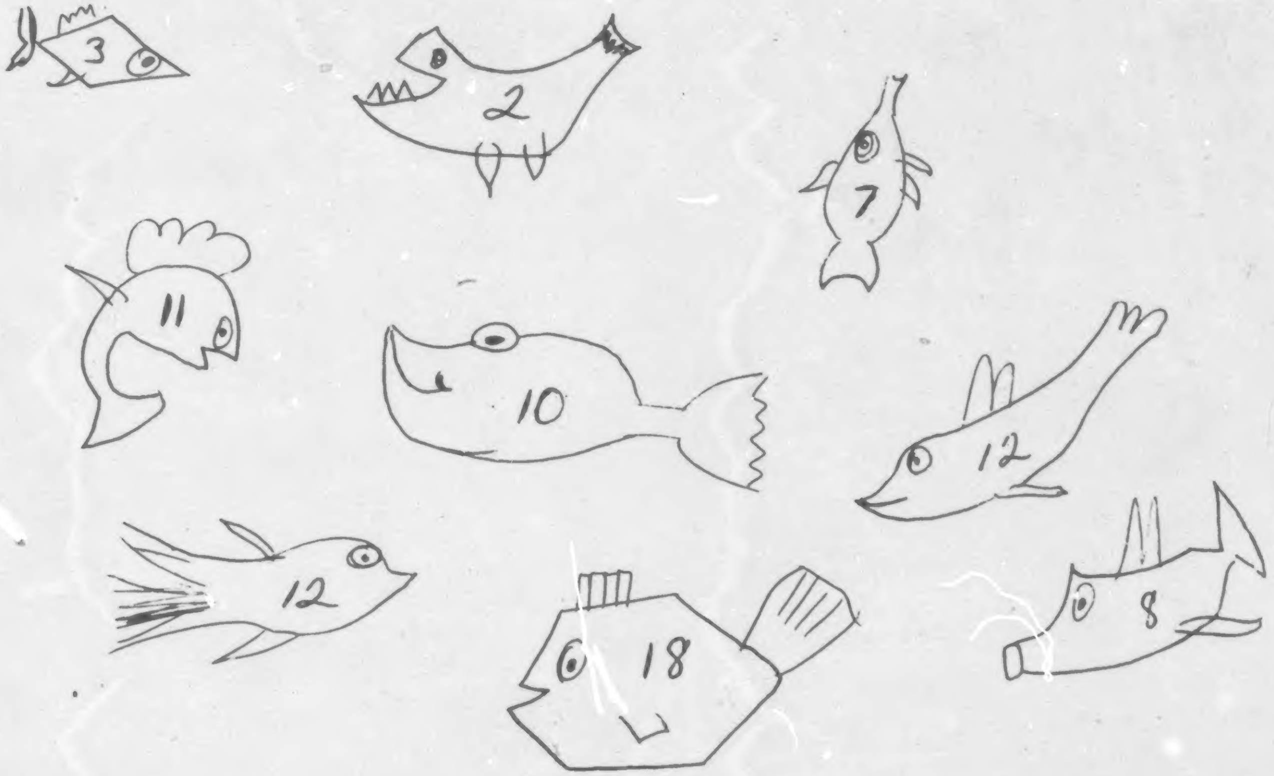
FISHING FOR Numbers

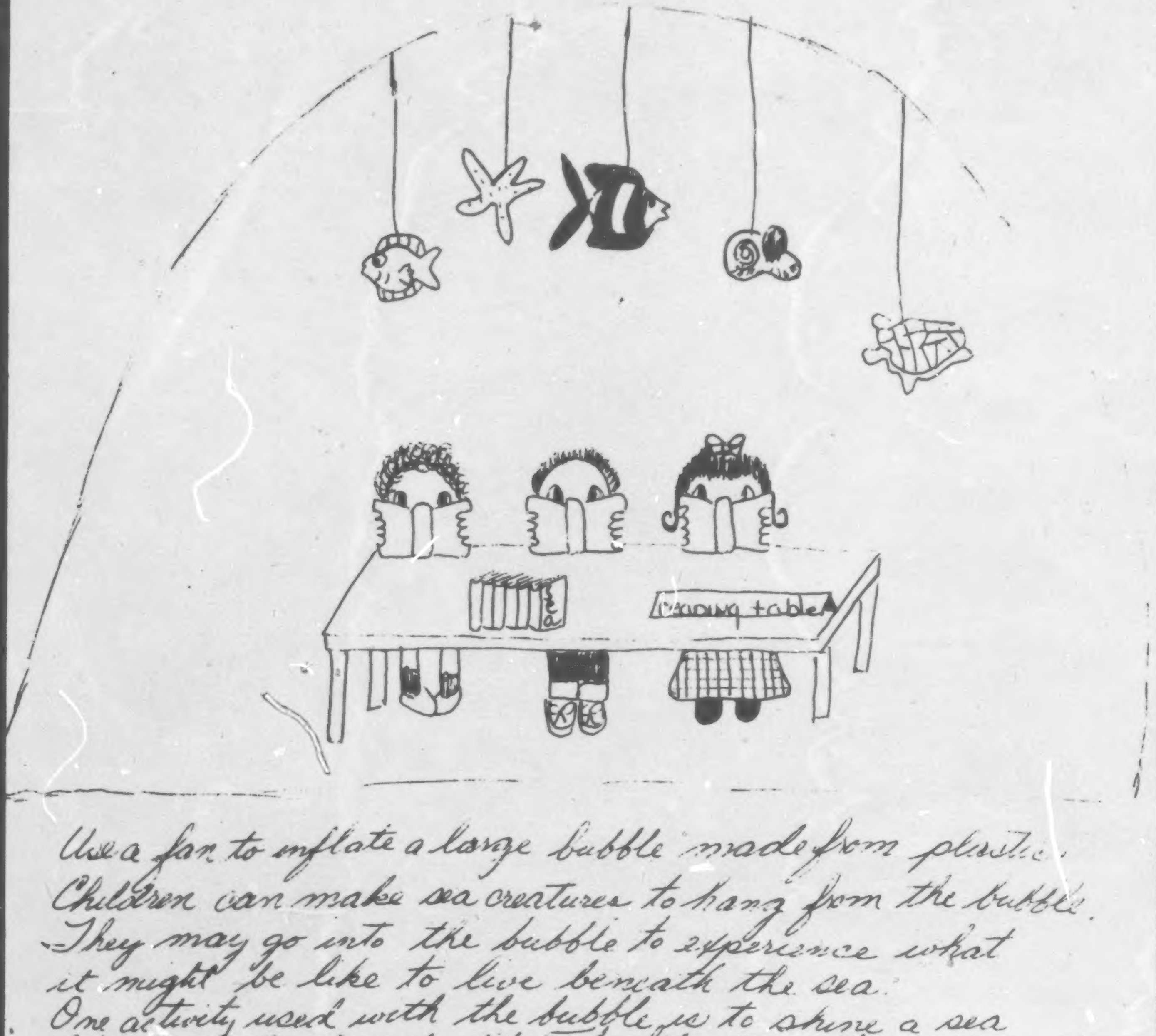
Each fish has the number of pounds it weighs printed on it. Catch four fish whose total weight is 20 pounds.



CRAZY TREASURE HUNT

This can be used to reinforce almost any kind of skill you're teaching. Suppose you're working on multiplication facts. Using cut numerals, post the products in various parts of the room - under the clock, on the waste can, and so on. If 16 appears on the waste can, ask a child to factor 16 when he throws something into the can.

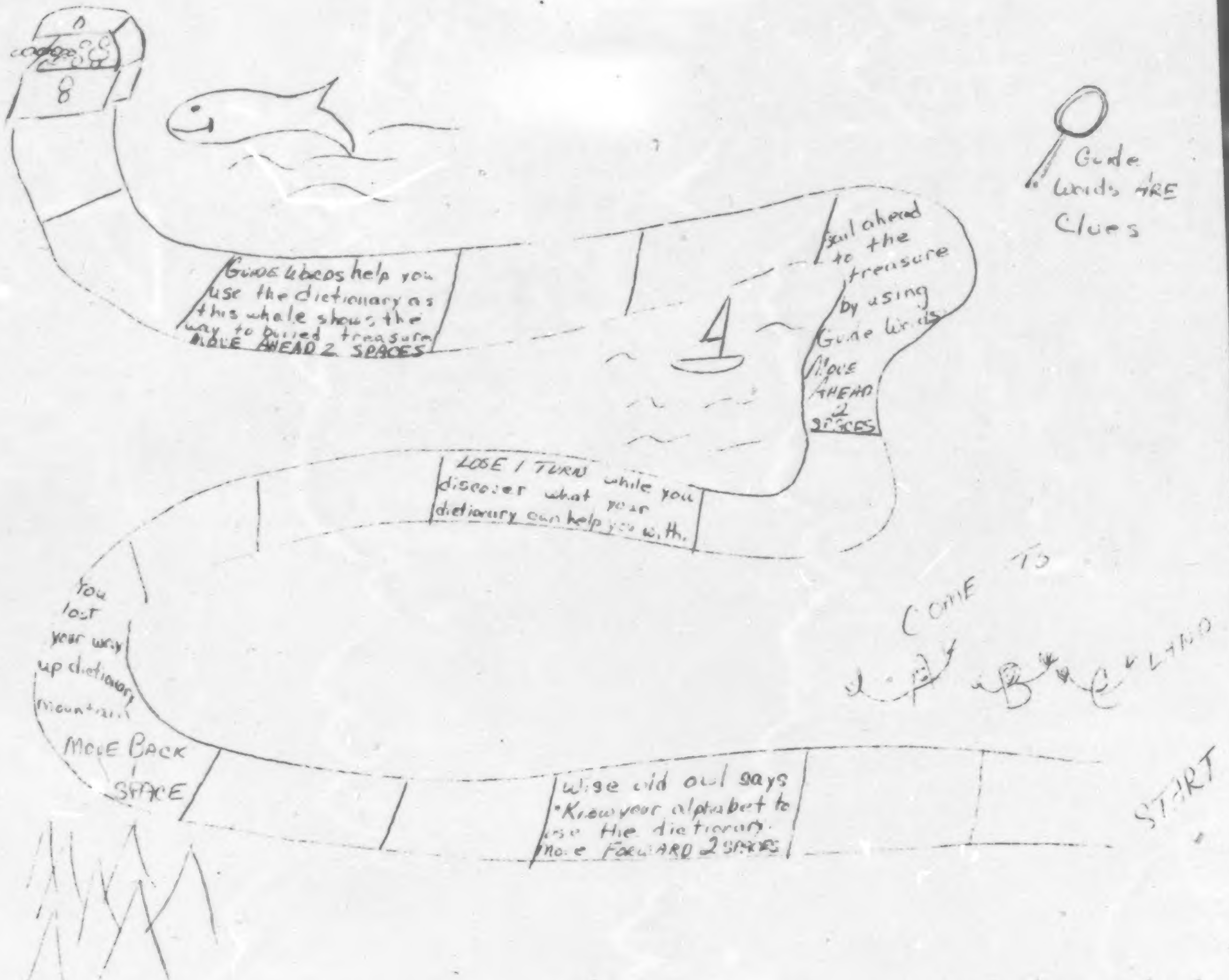
PLASTIC BUBBLE



Use a fan to inflate a large bubble made from plastic. Children can make sea creatures to hang from the bubble. They may go into the bubble to experience what it might be like to live beneath the sea.

One activity used with the bubble is to shine a sea filmstrip onto the side of it. The filmstrip should be put in the projector backwards. Appropriate music can be played inside. The children might read, write creative stories or just relax.

TREASURE HUNT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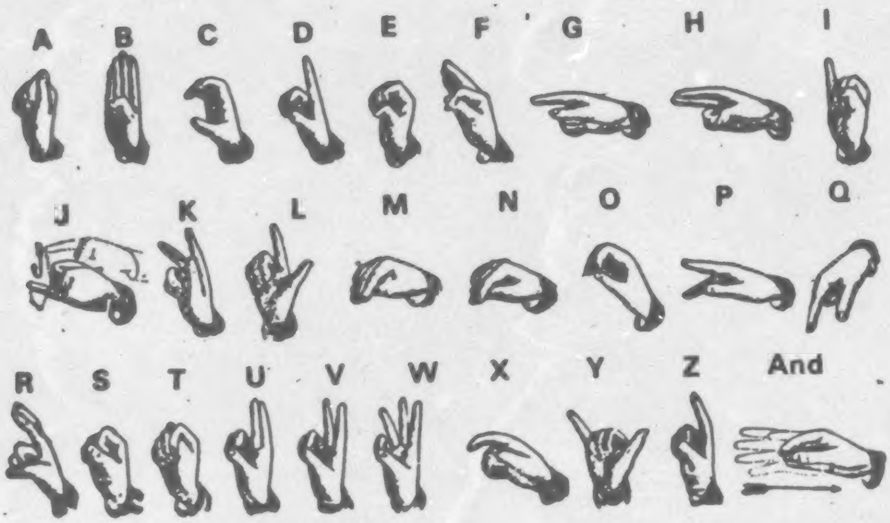
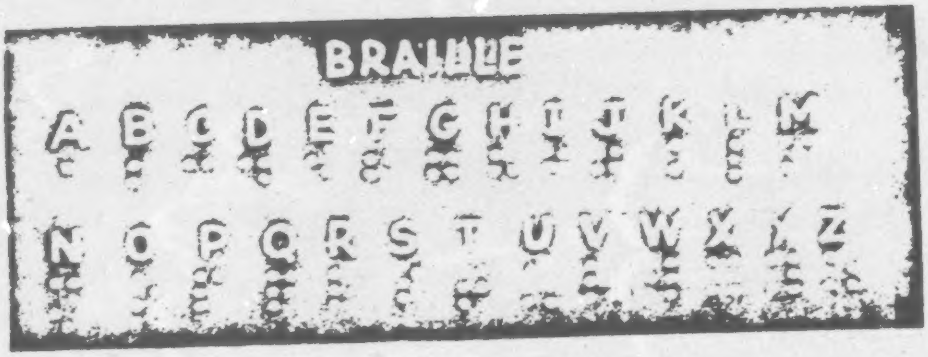
Guide Words ARE Clues
Guide Words help you use the dictionary as this whale shows the way to buried treasure MOVE AHEAD 2 SPACES
Sail ahead to the treasure by using Guide Words MOVE AHEAD 2 SPACES
LOSE 1 TURN while you discover what your dictionary can help you with.
COME TO ABC LAND
You lost your way up dictionary mountain MOVE BACK 1 SPACE
Wise old owl says "Know your alphabet to use the dictionary" MOVE FORWARD 2 SPACES
START

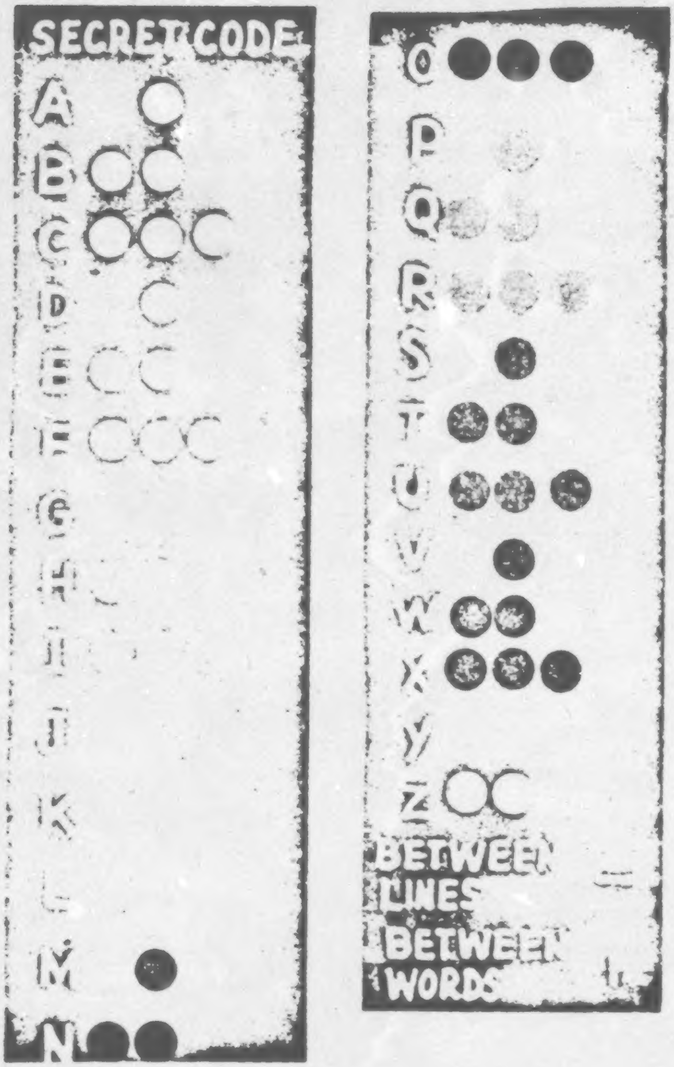
Treasure hunt encourages the use of the dictionary and is adaptable to any unit by changing question cards. Materials needed are a game board (see above), markers, and 25 or 30 question cards. Question cards could read as follows. "What is the plural of mongoose? MOVE 2 SPACES." "Find a picture of a peninsula. MOVE 1 SPACE." "What does the abbreviation qt. stand for. MOVE 1 SPACE." Most questions found on work or drill sheets can be used on these cards.

Play begins after cards are shuffled & placed beside board. First player pulls a card, answering question (if he doesn't know the answer - to the dictionary), and then he moves his marker as directed. Winner is player reaching treasure chest first.

Add to the game's excitement by including advance, free, or return spaces on board.


A B C D E F G H I
J K L M N O P Q
R S T U V W X Y Z And


BRAILLE
A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z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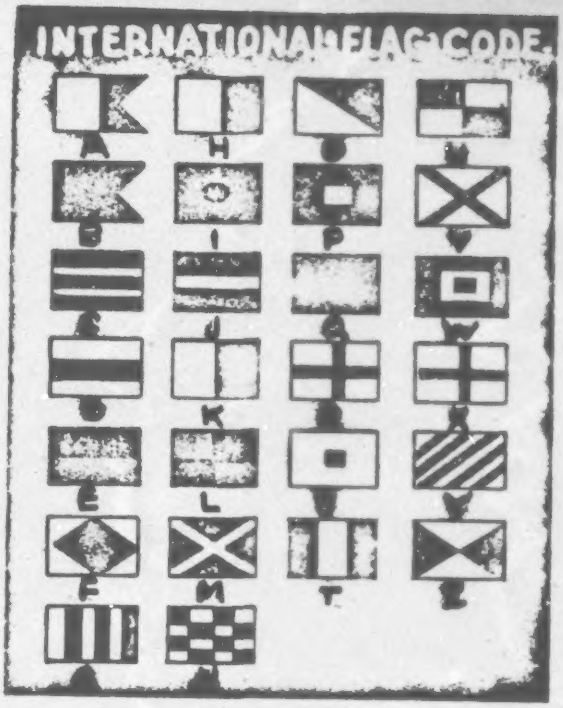
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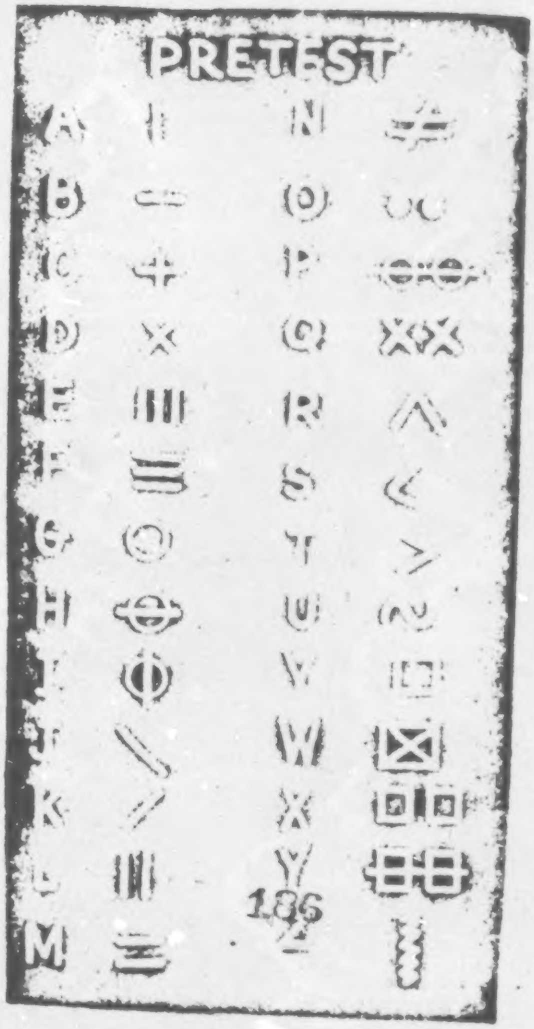
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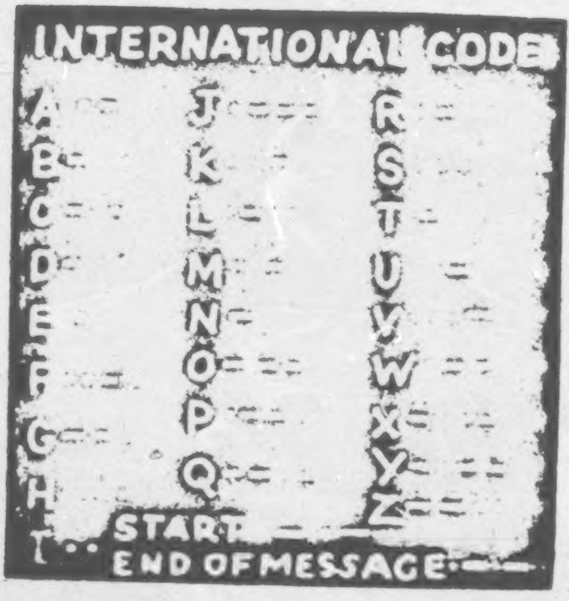
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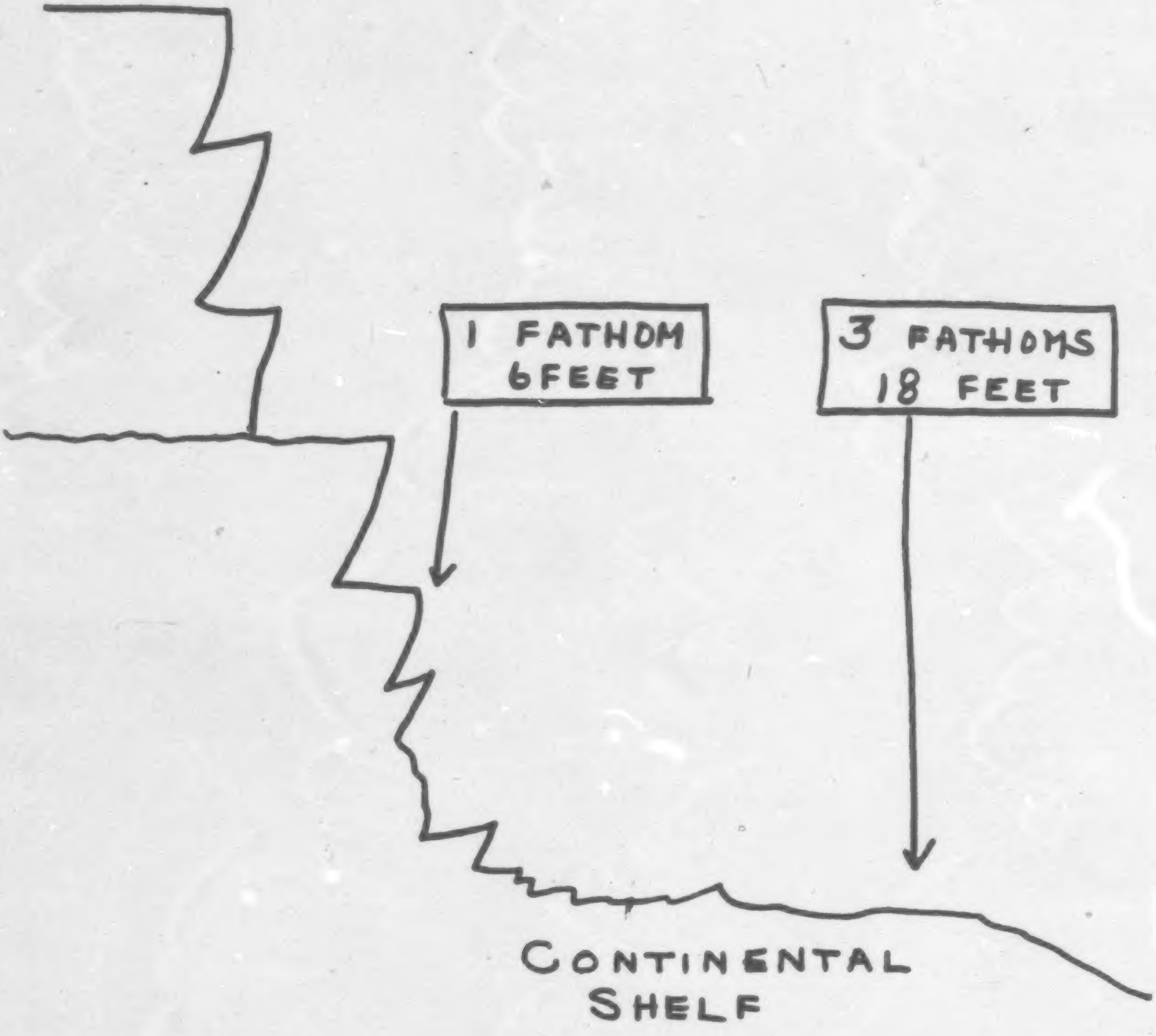
START
END OF MESSAGE

1 FATHOM = 6 FEET

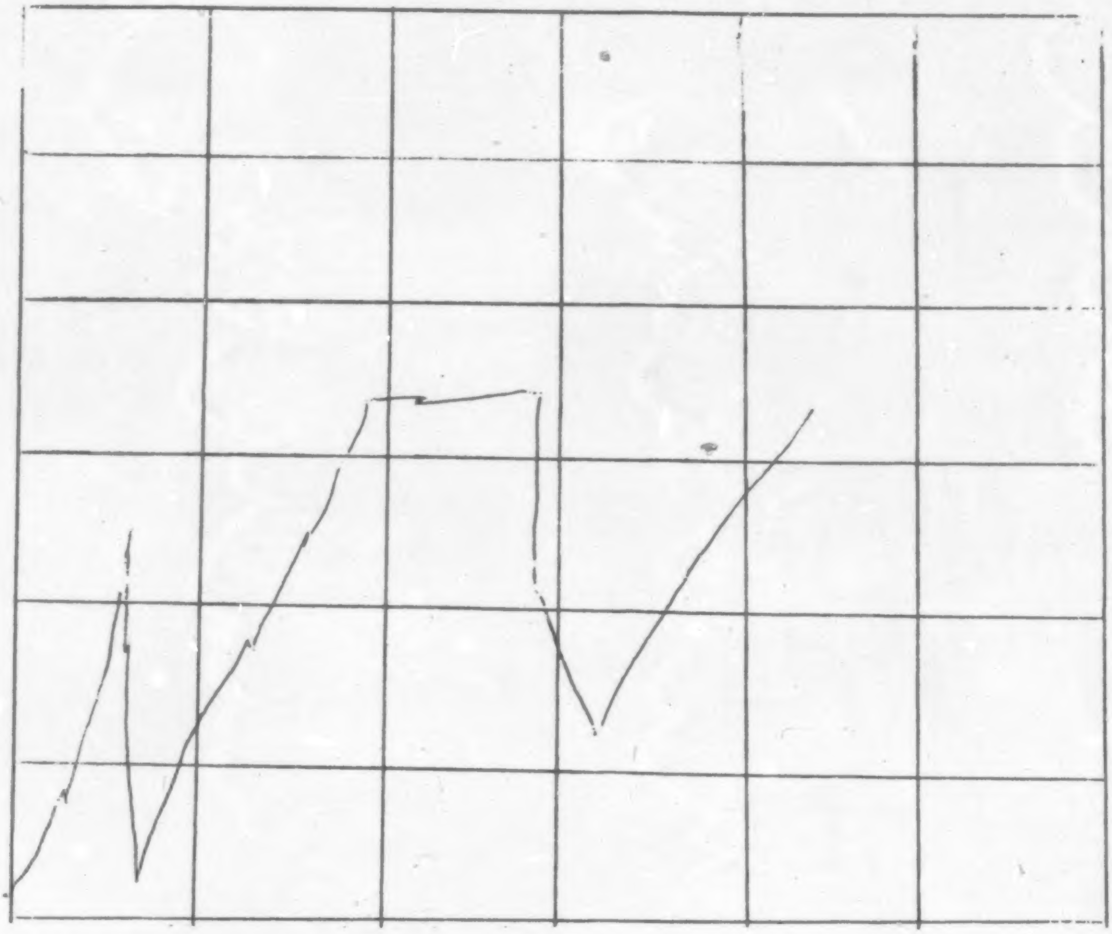
1 KNOT = 6076.11549 FEET

1 LEAGUE = 3 MILES

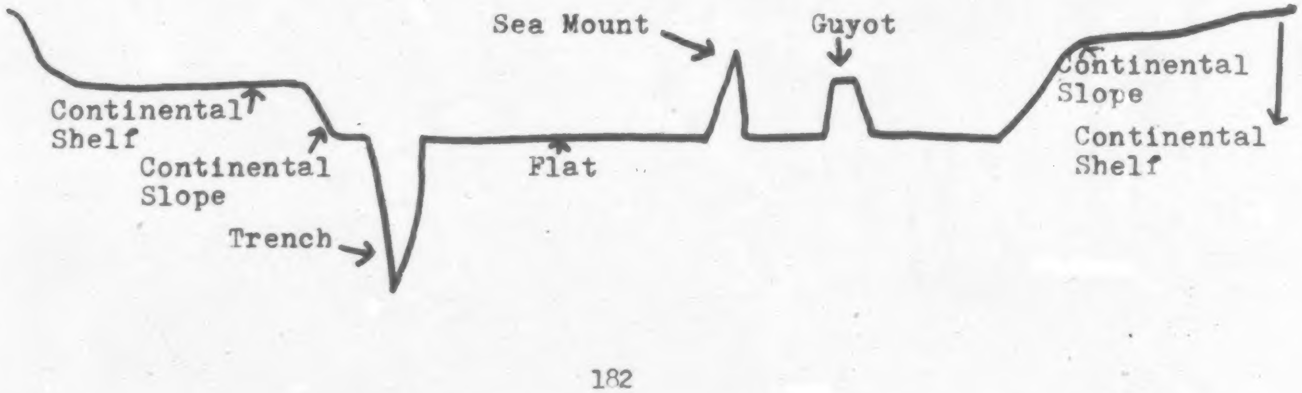

1 FATHOM
6FEET
3 FATHOMS
18 FEET
CONTINENTAL
SHELF

FATHOMETER: Measures the fathoms of water below the ship. It does this by measuring the time it takes each echo to bounce back and draws a picture that shows how deep the water is.

EXPERIMENT: Bounce rubber ball from different heights. Record data.



The Fathometer at work measuring the ocean floor.


Sea Mount
Guyot
Continental Shelf
Continental Slope
Trench
Flat
Continental Slope
Continental Shelf

THIRD EXPERIENCE LEVEL

Occupational Cluster: Fine Arts and Humanities

Major Project: Music Instructor

Subject Matter: Math, Science, Social Studies, Language Arts

Subject Matter Focus: fractions, geometry, sound (Chapter 2, ESLI), early history of music, development of music, music today, listening skills, narrative poems, describing moods, colorful words, letter writing.

Career Development Concepts:

Dimension: Coping Behavior
Sub Concept: There is a universality of feelings and aspirations of all people...regardless of physical appearance, nationality, creed, sex, or ethnic background.

Dimension: Decision Making
Sub Concept: An individual's decisions affect himself and others.

Dimension: Lifestyle
Sub Concept: Leisure time activities and interests may lead to a career, and one's career may in turn affect the amount and use of leisure time.

Dimension: Self development
Sub Concept: An individual's interests, aptitudes, values, and achievements are not always the same as those of his peers.

Dimension: Educational Awareness
Sub Concept: Career-oriented learning may take place in school or out of school. Learning achievement depends upon effort and ability.

Dimension: Attitudes and Appreciation
Sub Concept: Completion of a worthwhile task

Teacher Goals:

1. Encourage appreciation of music as a substantial component of a culture or subculture.
2. Increase the sensitivity of all children to the power of music as an art.
3. Develop awareness of the social, psychological, and physical benefits of involvement in music.
4. Develop awareness of the duties, qualification, rewards, and difficulties.
5. Develop an understanding of the periods in history, culture, and moods portrayed by different styles and types of music.

Pupil Performance:

1. Students will appreciate those who have contributed to our musical culture.
2. Students will understand the basic principles of sound.
3. Students will have some understanding of the educational requirements and natural talents required.
4. Students will participate in a musical performance.
5. Students will be able to identify some of the periods in history, culture, and moods portrayed by different styles and types of music.
6. Students will be able to identify the instruments and categorize them according to string, brass, etc.
7. Students will learn a little of the life and works of a few famous musicians.
8. Students will be able to count time - using their knowledge of fractions in relation to note value.
9. Students will recognize geometric shapes and their effects on the sound of musical instruments. They will recognize that shapes also show form in music.
10. Students will develop listening skills.
11. Students will begin to understand the tremendous effect music has on our society and the great satisfaction it gives to both the performer and listener.

Suggested Activities:

1. Experiment - Principles of sound - types of materials used for different sounds.
2. Make some early instruments.
3. Make collage of musical shapes.
4. Trip to music store - price instruments.
5. Finger paint to different types of music.
6. Illustrate lyrics of song.
7. Write narrative poem.
8. Make booklet - "My Favorite Songs" and illustrate.
9. Act out How Music Began.
10. Perform musical "Hansel and Gretel".
11. Make music vocabulary box.
12. Participate in rhythm band activities.
13. Interview music director.
14. Trace the history of music by painting a mural.
15. Identify countries which have contributed great musicians (map study).
16. Identify geometric shapes and their use in music.
17. Be able to read and count time on musical scores (involves the use of fractions).

Discussion Questions:

Play three different styles of music (records)

1. Which record did you enjoy the most?
2. Which record did you enjoy the least?
3. What kinds of sounds did you hear?

4. How do you think these sounds were made?
5. How did each record make you feel (mood)?
6. Why do you suppose each type of music was written?
7. What kind of person do you think composed each song?
8. How did these people learn to play or sing?
9. What do you think a music instructor would have to do before he can teach others to play or sing?
10. Do you think this is important work and are you happy that we have music instructors?

Human Resources:

Mr. Robert Thommes	Music Director, Farmer City
Mrs. Cathy Hammer	Organist, Farmer City
Mrs. Barbara Vance	Music Teacher, Farmer City
Steve Morgan	Music student
Gene Holt	Piano Tuner, Farmer City
Mrs. Janice West	Music Director (Church)
Pat Dardana	Professional Musician
Music Store Manager	Music, Music Store
Illinois Wesleyan School of Music	Bloomington
Music, Music Store	Bloomington
Church, Methodist	Farmer City
Band, Concert	Farmer City-Mansfield High School
University of Illinois	Champaign-Urbana

Material Resources:

records
instruments
charts
books
sheet music
filmstrips
posters
brochures

Books (Franklin Learning Center)
Bunche, An Introduction to the Instruments of the Orchestra
Cone, Leonard Bernstein
Cornell, Louis Armstrong Ambassadors All
Cretan, All Except Sammy
Day, American Indian Song
Emberley, Yankee Doodle
Hosier, Music, History and Criticism
Hosier, Musicians
Kaufmann, The Story of Beethoven
Kaufmann, The Story of Mozart
Kaufmann, The Story of Haydn
Kraske, America the Beautiful, Stories of Patriotic Songs
Miller, The Musicians of Bremman
Richards, Louis Armstrong
Seeger, American Folk Songs for Children - in Home, School, and Nursery School.
Smith, The First Book of the Orchestra
Every Child's Book of Nursery Songs, Crowe Publishing Co.
Little Songs for Little People, 1968, Parents' Magazine Press

Books (Mansfield Learning Center)
Craig, The Story of Musical Notes
Craig, The Woodwinds
Gilmore, Folk Instruments
Lerner, Places of Musical Fame
Miller, The Story of the Star Spangled Banner
Surplus, Follow the Leader
Surplus, The Alphabet of Music
Tetzlaff, Shining Brass

Records, (Franklin Learning Center)
A Child's Treasury of Songs
Beethoven and the Pastoral Symphony
Burl Ives Folk Lullabies
Classroom Rhythms: Rhythms of Cowboys and Indians
DeBussy Piano Music
Dutch Folk Songs
Fess Parker Cowboy and Indian Songs
Folk Songs from the Far Corners
Folk Songs of the Old World
Good Manners through Music
Little Drummer Boy and other songs of Christmas
Music for Relaxation
O'er the Ramparts we Watched
Quiet Music
Rhythmic Activities, Physical Fitness
Simplified Folk Songs
Sing and Do Songs
Songs of our Heritage For Young Americans
Sounds of the Sea
Stories and Songs about the Sea
The Sorcerer's Apprentice
Tchiakowsky - Nutcracker Suite
Thirty Favorite Songs of Christmas
Tubby the Tuba
Walt Disney's Babes in Toyland

Records (Mansfield Learning Center)
Flight of the Bumblebee
Hansel and Gretel
Hear the Animals Sing
Mary Poppins
Music of the World's Peoples
Peter Pan
Rusty in Orchestraville
This Land is my Land
Too Much Noise

Filmstrips with records
Children's Songs of Mexico
Favorite Songs of Japanese Children
Story of Handel's Messiah

Filmstrips

f-29 Musicians of Bremman
d-27 Rhythm About Us
d-22 Sounds That We Hear
e-44 The Animal Musicians
Music Around the World

Occupations Within Fine Arts and Humanities

Professional Musician
Dancer
Author
Literary Writer
Music Critic
Art Critic
Actress
Conductor
Sign Painter
Music Director
Stage Designer
Cartoonist
Singer
Playwright
Music Arranger
Commercial Artist
Music Teacher
Poet
Piano Technician
Radio and TV Director
Actor
Composer
Orchestra Leader
Jeweler
Free Lance Artist
Singing Teacher
Floral Designer
Orchestrator
Sculptor
Fashion Designer

THIRD EXPERIENCE LEVEL

Occupational Cluster: Consumer and Homemaking-Related Occupations

Major Project: Chef

Subject Matter: Math, Science, Social Studies, Language Arts

Subject Matter Focus: Cost of food, measurement, menu prices, multiplication and division, nutrician, eating customs of other countries (Holland, Equador, Oriental countries), organizing, sequencing, advertising, borrowed words.

Consumer and Homemaking Related Occupations: Manager, dietician, nutritionist, waitress, food testers and researchers, clothing designers, textile worker, dry cleaners, tailors, model, child care nurses, family counselor, social worker, interior, upholsterer, cabinet maker.

Career Development Concepts:

Subconcept: Coping Behaviors
Some skills can be transferred from one job to another.

Major Concept: Self-development
Individuals differ in their interests, aptitudes, values and achievements.

Major Concept: Attitudes and Appreciations
Society is dependent upon the productive work of individuals.

Subconcept: Attitudes and Appreciations
Work involves the acceptance of responsibility for a task.

Most occupations include common expectations, such as punctuality, dependability and avoidance of excessive absence.

Subconcept: Career Information
Occupations may have certain dress requirements. Occupations require the use of specific materials and equipment.

Teacher Goals:

Enlarge pupil's awareness of different types of food the chef must have knowledge of. Encourage appreciation of the creative art a chef must have.

Pupil Performances:

1. Students will use Math skills to compute food costs.

2. Students will use fractions in relation to food measurements.

3. Students will be able to compute meal prices from a menu.

4. Students will involve multiplication and division in computing mass food costs.

5. Students will be able to plan a nutritious meal.

6. Students will experience eating customs of Holland, Equador and other countries.

7. Students will use sequencing skills in recipe following.

8. Students will use advertising skills in publicity for a restaurant.

9. Students will make simple menus in other languages.

Suggested Activities:

1. Collection of menus
2. Make menus in different languages
3. Prepare meals of other countries.
4. Use Scott Foresman Health Book 3-Chapt. on nutrition.
5. Scott Foresman Math Book 3 (1975) p. 119.
6. List the 7 basic food groups and illustrate.
7. Make a daily time schedule in preparation of food.
8. Study the eating customs of other countries.
9. From the total cost of the food purchased for a meal, find the cost to feed each child.
10. Write the restaurant menu ala carte with prices for each item and have the children figure out how much they have to pay for what they have ordered.
11. Study and use measurement used in cooking a meal.
12. Write an advertisement for your restaurant. Use descriptive adjectives to make the food appealing.

13. Practice the communication skills necessary to a waitress.

14. Study the nutritional requirements for a balanced meal. Plan a menu for the dinner that has all food groups and would provide a balanced meal. Study minimum requirements.

15. Bring a cookbook to display and view.

16. Bring mom's favorite recipe from home and compile a booklet.

Discussion Questions:

1. Discuss how the location determines the food people eat.
2. Discuss the main food sources of the United States as compared with Holland and Equador.
3. Discuss how American cooking developed.
4. What do you really know about being a cook.
5. Do you know that it is estimated that for every 540 persons there is one eating place and that by 1985 one of every two meals will be eaten outside the home?
6. What salary can you expect?
7. Who would you be working with if you were a chef?
8. How could you train to become a chef?

Suggested Human Resources:

1. Restaurant chef
2. Restaurant manager
3. Jim Hillary (Hen House Cook)
4. Chinese restaurant chef
5. Italian restaurant cook

Material Resources: Franklin School Learning Center

B 3,4	Children of Holland
B 16	Spanish Children
B 37	Family of Brazil
D 2	The Story of Bread
D 3	The Story of Fruits and Vegetables

D 42	What's Under the Farmer's Garden
E 42	The Gingerbread Boy
F 7	Foods for Health
G 40	Children of Equador
G 41,48	If you were Born in Holland
H 18	Henk & Henny of the Netherlands
H 25	Central Farming Region

Filmstrips and Records: Learning About Food

Books
- Carafole Marci and John; *Look Who's Cooking*
- Podendorf, Illa; *Food Is For Eating*

Mansfield Learning Center:
- Yellow Pages Career Library; *Cook*
- (Free Booklet) *Your Career in the Lodging Industry*

Filmstrips:
- The Foods we Eat
- Supplying Food for Our Cities
- Food Comes from Many Places
- Job Opportunities in a Restaurant

Books:
- Dorothy Stever; *At the Wholesale Produce Market*
- Carla Grenne; *I Want to be a Restaurant Owner*

FOURTH EXPERIENCE LEVEL

Occupational Cluster: Construction

Major Project: Carpenter

Subject Matter: All subject areas

Subject Matter Focus: Math
Reading English & Metric rulers
Measuring accurately
Scale drawings (blueprints)
Use of + - x ÷

Subject Matter Focus: Language Arts
Interviewing skills
Define Vocabulary
Writing complete sentences
Reading general information
Reading charts

Subject Matter Focus: Social Studies
Supply and demand
Labor unions
Constructions differ according to available resources & climates
How carpentry differs in urban and rural areas

Subject Matter Focus: Science
Different woods are used for different constructions
Effect of weather and seasons
Ecological aspects of lumbering

Subject Matter Focus: Art
Architectural styles
Making constructions

Subject Matter Focus: Music
Rhythms & sounds of the trade

Career Development Concepts
Dimensions:
C.B. - Performance requirements for a job may change with time.
C.B. - Several skills may be required to perform a given skill.
L.S. - Moral principles are an integral part of one's work life.
S.D. - A person's membership in a group affects the group as well as himself.
S.D. - An individual is influenced by economic forces.
A.A. - Society is dependent upon the productive work of individuals.

Teacher Goals:

1. Examine the career of a carpenter.
2. Enhance historical and geographical understanding of the role of carpentry in society.
3. Structure situations for pupils to use selected carpentry tools.
4. Encourage appreciation of the knowledge and skills needed by a carpenter.
5. Familiarize students with other jobs in the construction cluster.

Pupil Performances:

1. The students will be able to make a comparison between the career of a carpenter and a career he might choose.
2. The students will be able to name other jobs in the Construction Cluster.
3. The students will learn carpentry vocabulary terms.
4. The students will describe physical skills required for carpentry work.
5. The students will identify selected carpentry tools and their uses.
6. The students will explain how measurement skills are valuable to a carpenter.
7. The students will draw a scale floor plan of a house.
8. The Students will cooperate with a classmate in constructing an object from wood.
9. The students will describe training requirements for being a carpenter.
10. The students will interview a carpenter, lumber yard personnel, industrial education teacher and/or a contractor.
11. The students will explain two ways that labor unions affect the carpentry trade in rural and urban areas.
12. The students will successfully build clay and straw structures as described in the ESS Teachers Guide.
13. The students will identify from a tape recording the sounds heard at a construction site.

14. The students will photograph various types of architecture and/or constructions.

15. The students will compare architectural styles through American history.

Suggested Activities:

1. Teach interviewing skills - (See material resources 1 and 2)

2. Use "When You Grow Up" study print on construction.

3. Develop a dictionary of carpenter's vocabulary.

4. List the main tools used by a carpenter and write an explanation of what each tool is used for.

5. Use the puzzle sheet "What's In A Toolbox?"

6. Have a carpenter come in.
    a. Interview him (students)
    b. Have him demonstrate tools.

7. Plan a fieldtrip to the lumber yard. Be prepared to interview the people there.

8. Tape the interviews. (Students will be prepared beforehand)

9. Relate the things learned on the trip to the rest of the class - if all members of the class weren't directly involved.

10. Have someone come from the lumber yard and bring examples of woods, nails, screws, etc. Have students interview him also.

11. Talk with the children about, and discuss the training necessary to become a carpenter.

12. Have a master carpenter come and talk to the class about labor unions.

13. Tape a trip to a building site.

14. Tape the sounds heard at a typical building site.

15. Tour a home that has been modernized and/or remodeled.

16. Tour a home of unusual design or architectural style.

17. Use "Structures" unit from the ESS teachers guide.

18. Have students bring selected carpenter's tools to school.

19. Have students practice hammering, sawing, planing, etc. on scrap wood obtained from the lumber yard.

20. Have the students draw a map "plan" of their house.

21. Teach measurement with rulers by doing lessons on measuring things in the classroom and various pieces of scrap lumber. Record results and compare.

22. Use floor plans and pictures from magazines to make a bulletin board or display.

23. Teach a lesson on drawing to scale.

24. Draw a floor plan of a house to scale.

25. Build a letter holder, wind vane, or wren house. (See plans in activity sheets.)

26. Use the REACT pages. These could be used as a basis for discussions.

27. Have capable high school students from the industrial education classes come to help and assist the children with their building projects.

28. Have students take photographs of various types of architectural structures.

29. Cut pictures from magazines which show how architecture has changed over the years and how it varies geographically.

30. Discuss the physical requirements for being a carpenter.

31. Have blueprints brought in for class study.

32. Discuss other jobs in the construction cluster.

33. Show and discuss films and filmstrips listed in Material Resources.

Suggested Discussion Questions:

1. How does a beginning carpenter get started?

2. What training does a carpenter need?

3. Do carpenters belong to unions?

4. What are the tools of the carpentry trade?

5. Would you like to be a carpenter?

6. Why is a carpenter's job important?

7. How does weather affect a carpenter's job?

8. What could happen if a carpenter was not honest or didn't take pride in his work?

9. How do you think the training of a carpenter has changed over the past fifty years?

10. Who hires carpenters?

11. Have you ever built anything from wood?

12. Why must a carpenter know how to measure accurately?

13. Upon what other occupations is the carpenter dependent?

14. Can a woman be a carpenter?

15. What other jobs are there in the field of construction?

Possible Human Resources:
Carpenters from the community (See the Human Resource file)
Alexander Lumber Company, Farmer City, Illinois 61842
High school students in industrial education
High school industrial educationteacher

Material Resources:

Architect - (Book) Yellow Pages Career Library
M. L. Wurman Publisher, Philadelphia, PA 19107 - 1974

Bear Cub Scout Book - Boy Scouts of America

Biggest House In The World, The - (Book) Leo Lionni, Pantheon.

Build A Better Life - (14 minute color film #4170)
Modern Talking Pictures Services.

Building A Building - (Sound Filmstrip) Educational Activities, Inc., Freeport, N.Y.

Career Pictures - Xeron Education Publication, Middleton, Conn. 06457 - 1974

Careers in Construction - (Book) Gloria Ramos. Lerner Publications. Co., Minneapolis, Minnesota - 1975

Carpenters - (Book) Yellow Pages Career Library, M.L. Wurman Publisher, Philadelphia, PA 19107 - 1974

Education - Who Needs It? - (Sound Filmstrip) Counselor Films Inc., Philadelphia, PA 19107

Interviewing - (4 page ditto that's attached)

Lifestyle - Dimension Guide - (Career Education Guide) by Peterson, Jackson, Tausig, Sutherland, Barford 1974 EIU, pages 267, 268, 273, 279.

Mathematics - Who Needs It? - (Sound Filmstrip) Counselor Films Inc., Philadelphia, PA 19107.

Monument To The Dream - (free 28 minute color film, S-105) Association-Sterling Films - American Iron and Steel.

Self-Development Dimension Guide - (Career Education Guide) by Peterson, Jackson, Tausig, Sutherland, Barford 1974 EIU, pages 175-176.

True Book of Tools for Building - (Book) Jerome Leavitt, Children's Press, Chicago, Illinois 1961.

To Touch The Sky - (28 minute color film #4392) Weyerhaeuser - Modern Talking Picture Service.

Values Clarifications - (Book) Simon, Howe, and Kirschenbaum, Hart Publishing Co., Inc., N.Y. 1972.

What Happens When You Build A House? - (Book) Arthur Shay, Reilly and Lee Books, Chicago, Illinois 1970

When You Grow Up - Construction - (Study Print) Mini Production, Inc. 1974

Whose Tools Are These? - (Book) Edward and Ruth Radlauer, Elk Grove Press, Inc. 1968

Woodworking, 1 and 2 - (Books) University of Wisconsin Extension, Madison, Wisconsin 4-H

Vocabulary

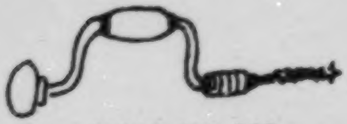
- Construction
- Hard Hat
- Labor Union
- Master carpenter
- Specifications
- Tape measure
- Level
- Brace and bit
- Folding rule
- Building site
- Wallboard
- Apprentice
- Scale
- Plywood
- Saw
- Plane
- Chisel
- awl
- Floor Plan
- Prefabrication
- Journeyman
- Contractor
- Blueprint
- Hammer
- T-Square
- Screwdriver
- Hacksaw

Construction jobs:

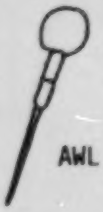
- Managers in Charge of Operations
- Designers and Architects
- Craftsmen (welders, carpenters, electricians, plumbers)
- Buyers (material purchasing)
- Equipment Operators
- Office Workers
- Interior Decorators
- Landscapers
- Scientists
- Researchers
- Surveyors

WHAT'S IN THE TOOLBOX?

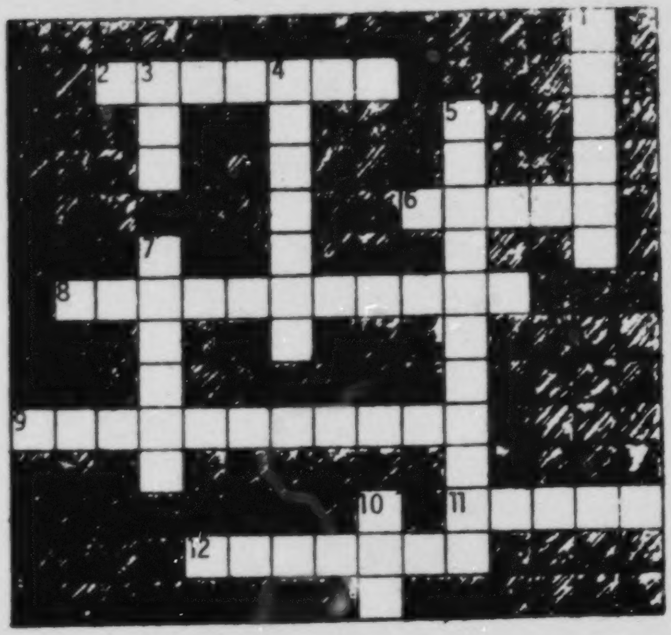
Use the definitions below to help you fit the names of the carpenter's tools into the puzzle.

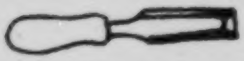


BRACE AND BIT

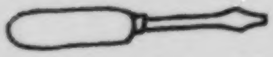


AWL





CHISEL



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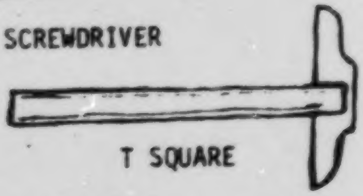

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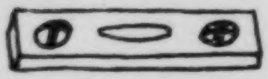
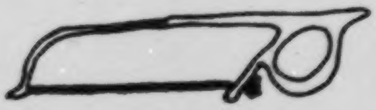
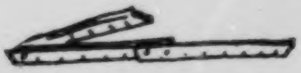


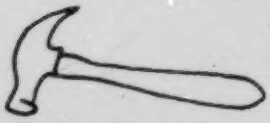
LEVEL



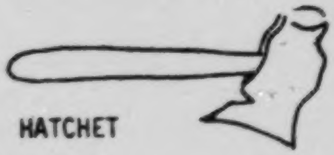
HACKSAW



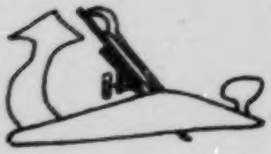
FOLDING RULE



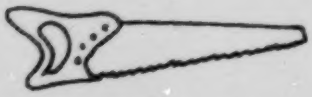
HAMMER



HATCHET



PLANE



SAW

ACROSS

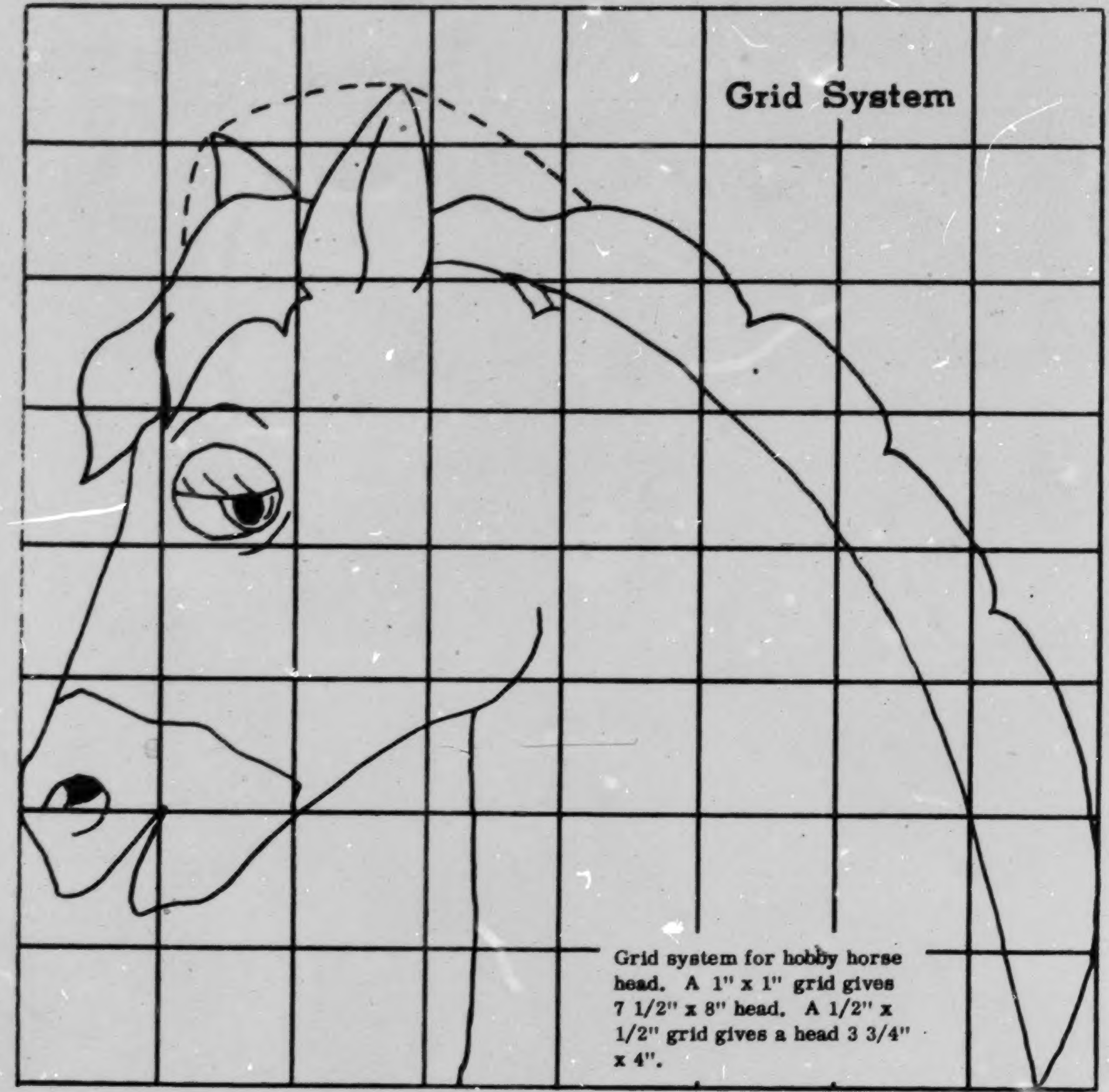
2. for chopping wood
6. for smoothing a surface
8. for drilling holes
9. for turning screws
11. for locating a horizontal line
12. for making right angles or parallel lines

DOWN

1. for shaping or chipping wood
3. for punching small holes
4. for cutting metals
5. for measuring lengths
7. for driving nails
10. for cutting wood

How To Read And Use Drawings

Reading drawings is as important to the builder and engineer as the road map is to the traveler. Last year you learned how to use trace patterns and read pictorial drawings. This year you will learn how to use the grid system to make drawings of irregular shaped articles. You will also learn more about pictorial drawings.



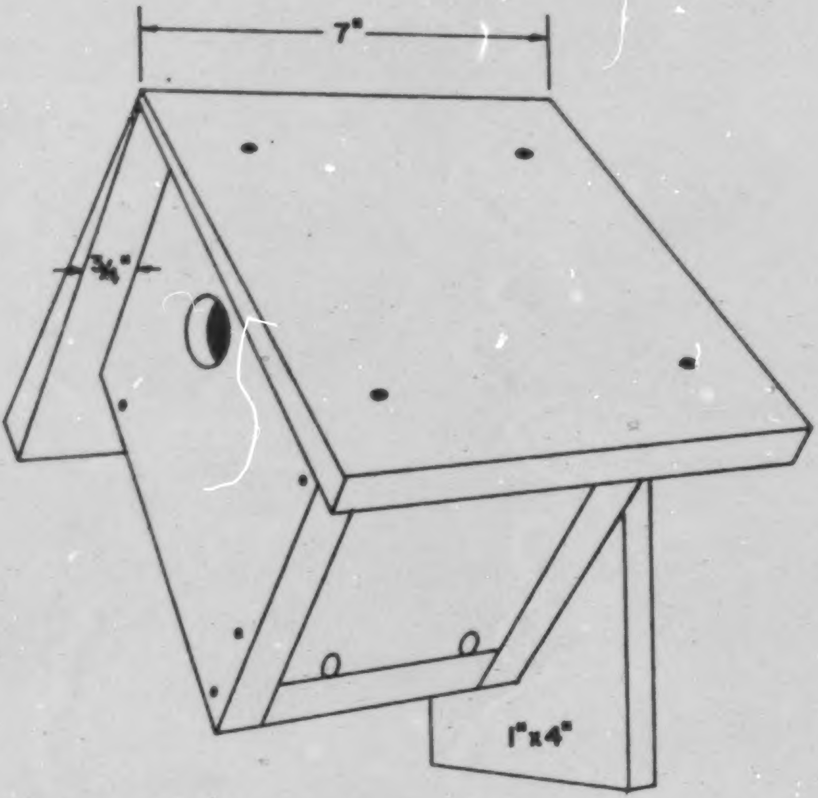
Grid system for hobby horse head. A 1" x 1" grid gives 7 1/2" x 8" head. A 1/2" x 1/2" grid gives a head 3 3/4" x 4".

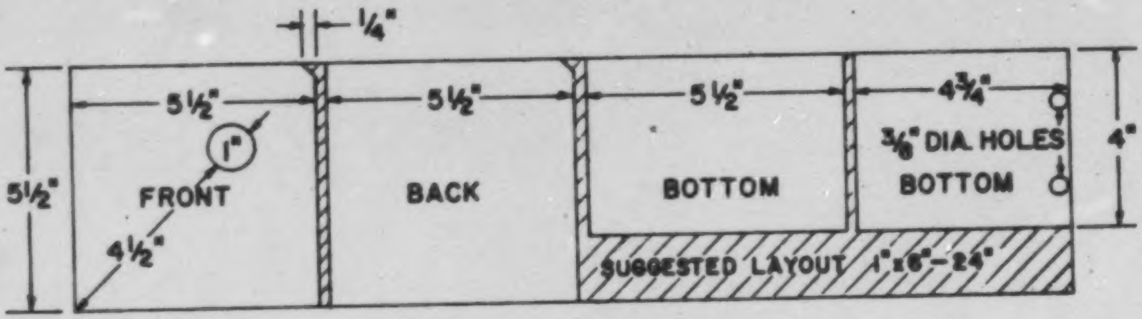
Wren House

NOTE: Attach one side of roof with wood screws, so it can be removed for annual house cleaning.

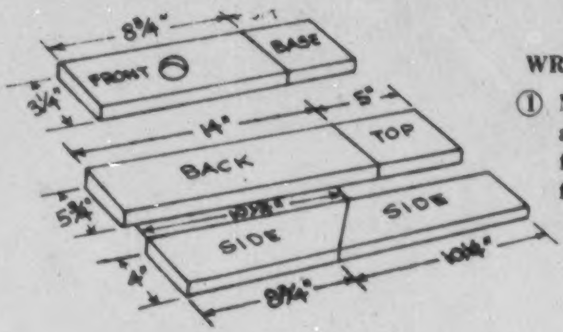
MATERIALS:

- 1 piece 1" x 6" x 24" (actual size about 3/4" x 5 1/2")
- 1 piece 1" x 4" x 12" (actual size about 3/4" x 3 1/2" x 12")
- Use box lumber, bevel siding, exterior plywood, heavy asphalt roofing, or tin for roof
- 4 - roundhead wood screws to attach one side of roof
- 9 - 2" nails
- 8 - 1 1/2" nails
- Water repellent wood preservative or penetrating exterior stain for finish

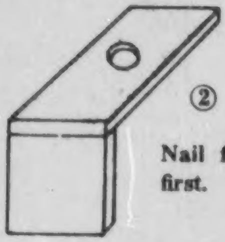



1/4"
5 1/2"
5 1/2"
5 1/2"
4 3/4"
1"
FRONT
4 1/2"
BACK
BOTTOM
3/8" DIA. HOLES
BOTTOM
4"
5 1/2"
SUGGESTED LAYOUT 1"x6"-24"

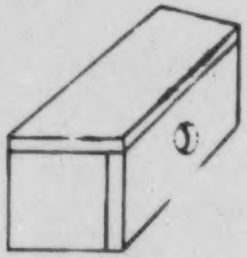
WREN HOUSE


8¾"
BASE
FRONT
¾"
14"
5"
TOP
BACK
5¾"
10⅛"
SIDE
SIDE
4"
8¾"
10¼"

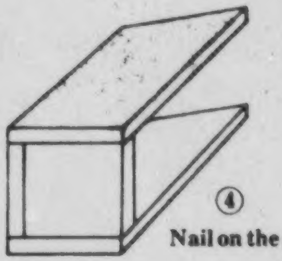
① Measure and cut. Drill a 1" hole about halfway from top to bottom of front.



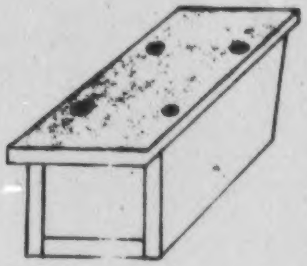
② Nail front to bottom first.



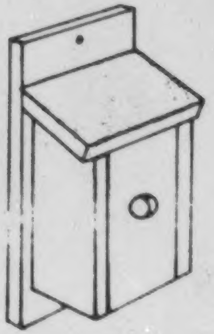
③ Then nail a side to front and bottom.



④ Nail on the other side.

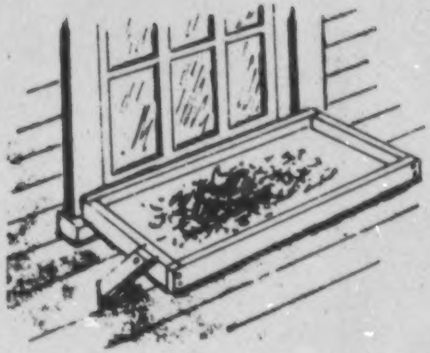


⑤ Screw on the back. If screwed on, it can be taken off when you want to clean out the house.



(6 Nail on the top last.
Put up the house from
6' to 10' above ground.

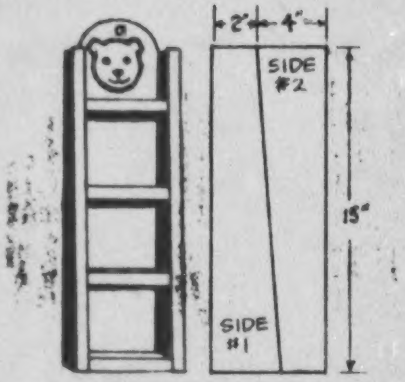
WINDOW FEEDER



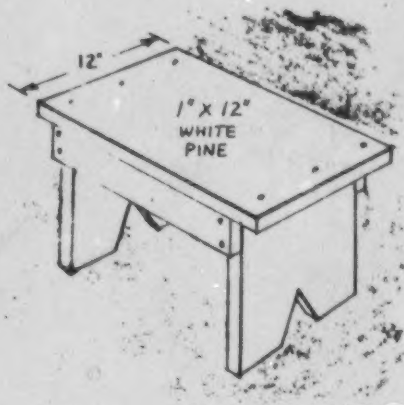
Use waterproof plywood or wide 1" pine. Nail a lip all around to hold in the food. Cut two braces to hold up the outer edge. Screw braces to tray and house.

SHELF

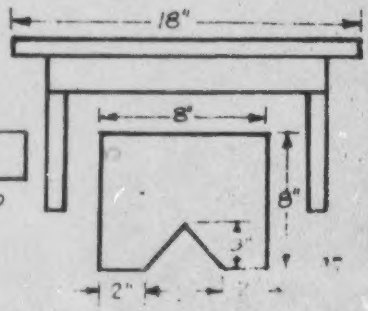
Here's a shelf you can make to fit the space you have. You can make it wide enough to fit lots of things on it. Or you can make it narrow for just a few. Use 1" pine or ¾" plywood.

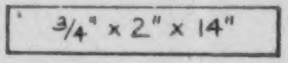

2"
4"
SIDE #2
15"
SIDE #1

BENCH


12"
1" X 12"
WHITE
PINE

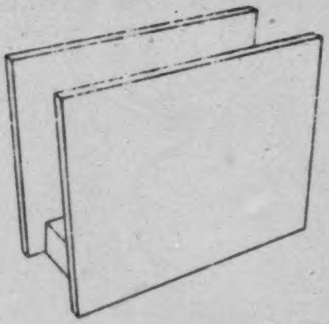
Use 1" pine or ¾" plywood. Fasten all parts with white glue and screws.

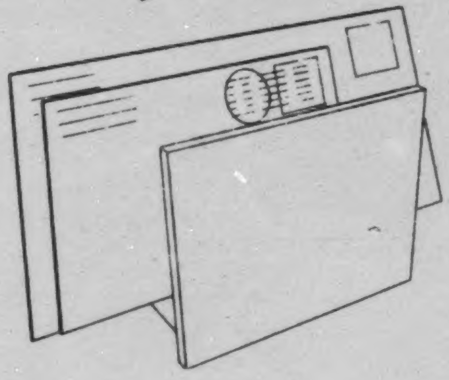




SIDE : MAKE TWO

Letter Holder





Materials:

1 piece 1" x 2" x 5" (about 3/4" x 1 5/8")

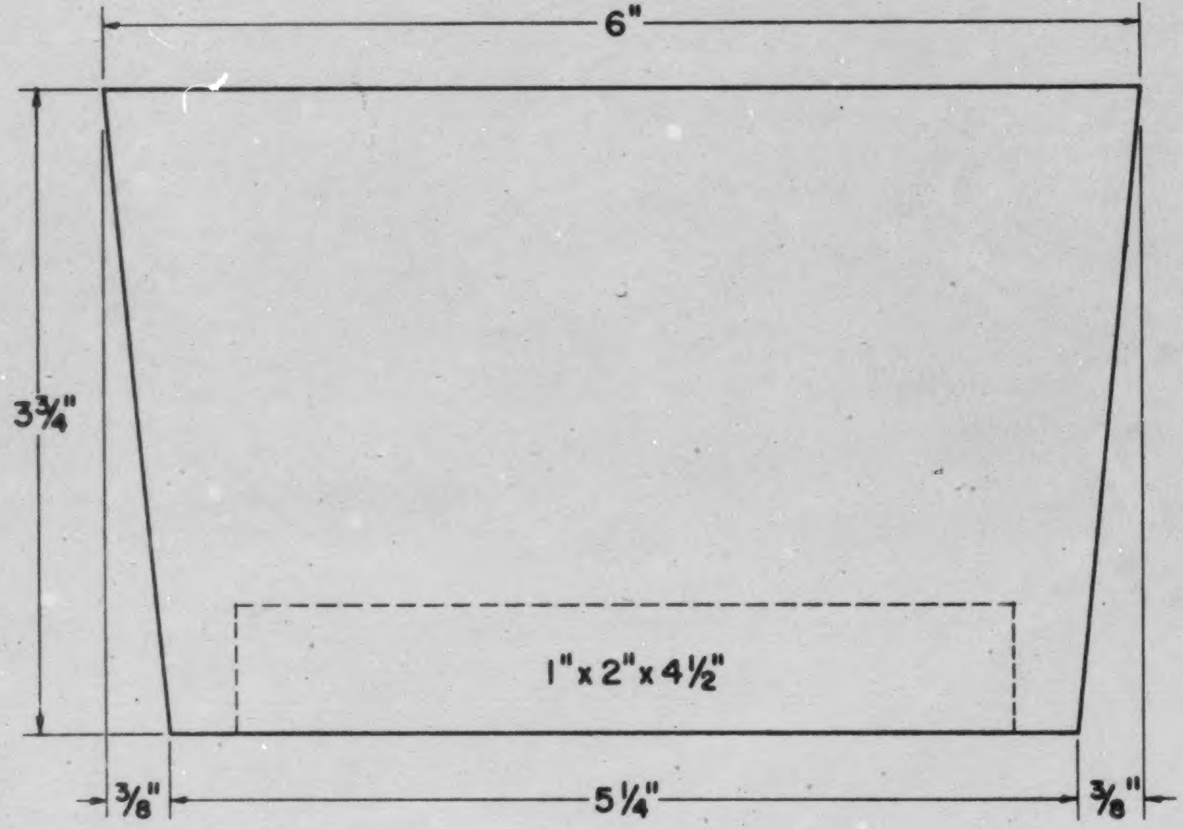
1 piece 1/4" plywood 6" x 8"

6 3/4" wire brads

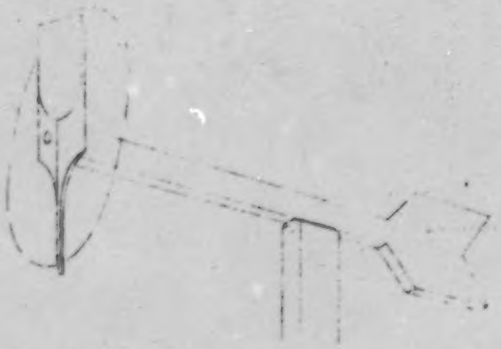
glue

Procedure:

1. Mark out or trace side piece pattern on 1/4" plywood. Make two.
2. Cut base piece 4 1/2" long from the 1" x 2". Cut it with square ends.
3. Sandpaper all parts.
4. Assemble with wire brads and glue. Brads may be omitted if you use glue clamps.
5. Apply a finish recommended in this circular.



Wind Vane



Material

1 piece 3/8" exterior plywood 3" wide and 16" long

1 piece 1" x 2" x 4' for stand and propeller. Pine or other soft wood preferred for propeller.

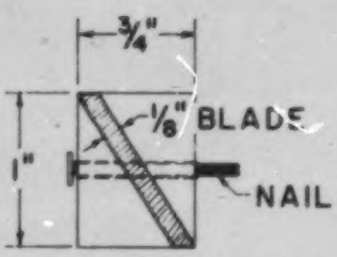
2 - 1 1/2" or 1 3/4" wire nails to attach propeller to weather vane and weather vane to stand.

Stain for finish as recommended in this circular.

Procedure:

1. Cut out arrow shape.

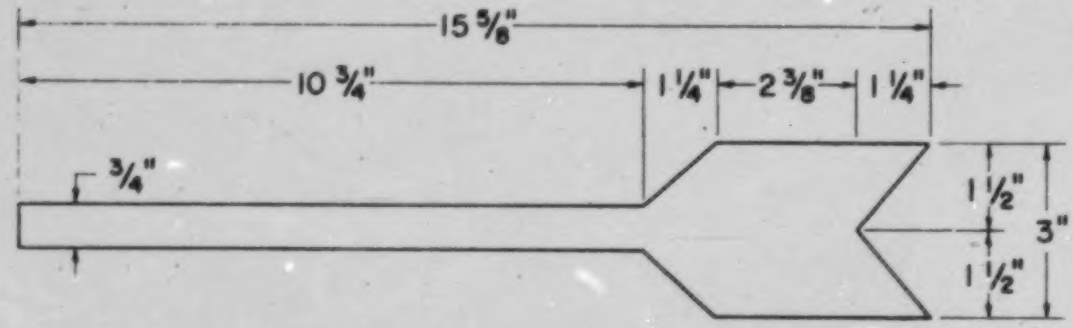
2. Cut out block to make propeller. Make center hole. Drill hole slightly larger than the nail you will use. A larger nail with the head cut off will work as a drill bit. Make the blades about 1/8" thick. When nearly finished put the propeller on the nail and hold the nail in your hand. Spin it. Cut wood off the heavy side until it is balanced.

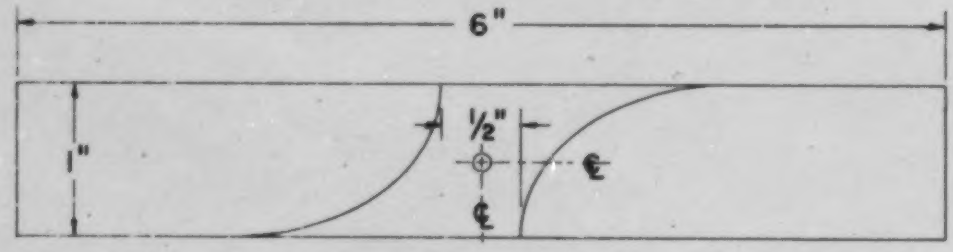


Attach the balanced propeller to the arrow. Drill a pilot hole to prevent splitting.

Find the balance point or center of gravity of the wind vane by balancing it over the edge of your knife. Mark it. Drill a hole for the pivot nail.

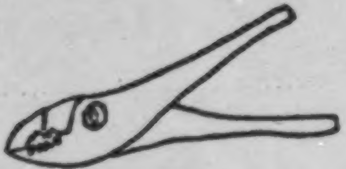
Attach vane to the stand.





PROPELLER

TOOLS OF THE TRADE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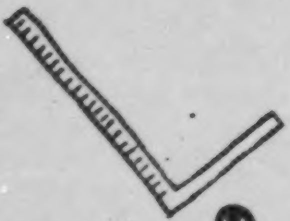
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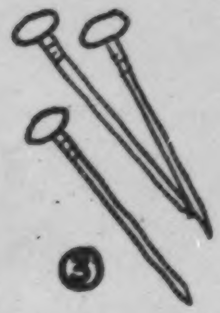
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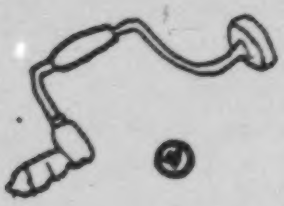
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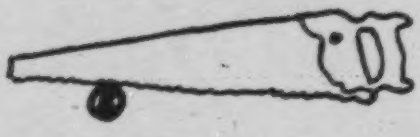
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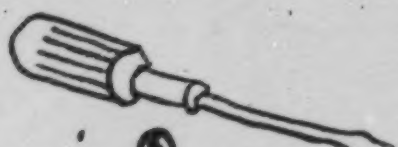
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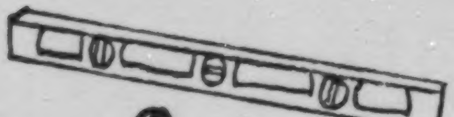
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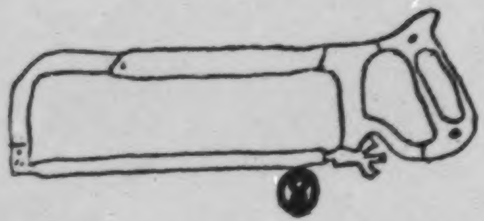
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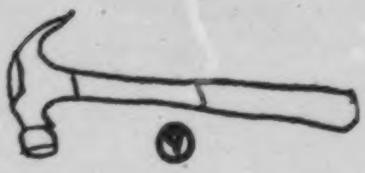
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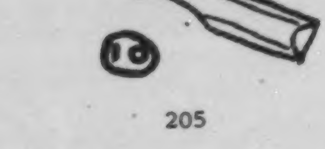
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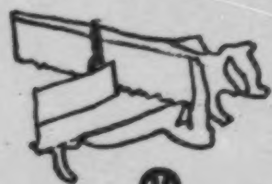
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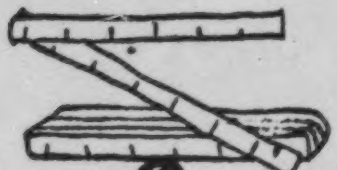
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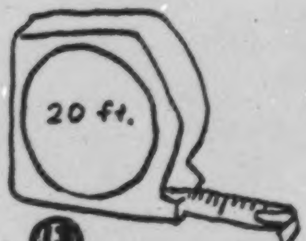

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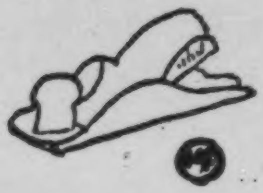
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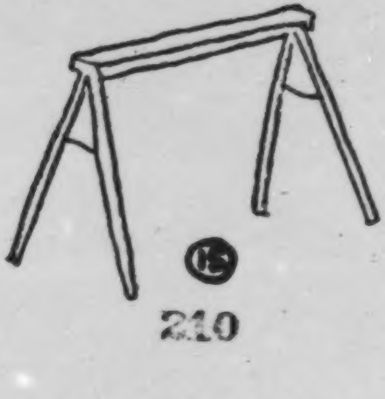
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FOURTH EXPERIENCE LEVEL

Occupational Cluster: Communications and Media

Major Project: Telephone Repairman

Subject Matter: Language Arts, Science, Math

Subject Matter Focus: Language Arts
- Interviewing skills
- Vocabulary development
- Writing complete sentences
- Correct telephone manners
- Correct telephone usage
- Role playing and dramatization

Subject Matter Focus: Science
- Line repair
- Workings of a telephone

Subject Matter Focus: Math
- Figuring cost of having one telephone
- Costs of extensions
- Costs of long distance calls at various times of day.

Career Development Concepts:

Dimension

C.B. - Certain behaviors are appropriate to specific job settings.
D.M. - An individual's decisions affect himself and others.
D.M. - An individual should consider alternative ways to reach a goal.
L.S. - There are many reasons why people work.
S.D. - Achievements in school and out of school are often dependent upon interests, aptitudes, and values.

Teacher Goals:

1. Examine the career of a telephone repairman.
2. Structure situations in which students can practice correct telephone usage and manners.
3. Give students "hands on" experiences with telephones.
4. Give students the opportunity to learn how a telephone works.
5. Familiarize students with other jobs in the Communications and Media cluster.

Pupil Performances:

1. The student will be able to interview a telephone repairman with interviewing competencies.
2. The student will use correct telephone manners.
3. The student will use telephones correctly.
4. The student will take telephones apart and put them back together.
5. The student will be involved in role playing.
6. The student will use the vocabulary of a telephone repairman in class work and interviewing.
7. The student will observe how a repairman splices and/or repairs broken lines.
8. The student will accurately figure telephone bills.

Suggested Activities:

1. Interview a telephone repairman.
2. Use telephones supplied by Illinois Bell Co. to practice correct usage and manners.
3. Take telephones apart-after instruction.
4. Figure the cost of having a telephone with and without extensions and with and without long distance calls.

Suggested Discussion Questions:

1. How do people learn how to repair telephones?
2. How do telephone repair people influence telephone customers?
3. What kind of personality do you think a repair person should have? Explain.
4. What might happen if a repair person was not honest?
5. What are five telephone manners you should use daily?
6. Is a telephone a toy? Explain.
7. How is a telephone repair person like a scientist?
8. Would you like to be a telephone repair person?

Human Resources:

Repairman

Material Resources:

Kit which can be ordered from Illinois Bell, Peoria
Movie from Illinois Bell on how a telephone works.
Achieving Success In The World of Jobs - Sound filmstrip, Singer Co.
Careers with a Telephone Company - (Book) Lerner Publications, Minneapolis, Minnesota 1973
Children's Dictionary of Occupations - (Book) Career Futures, Inc.
Requirements In The World of Jobs - Sound filmstrip, Singer Co.
Story Starter - (set of pictures)
When You Grow Up - (series of prints) Communications and Media

Communications and Media:

Managers in Charge of Operations
Writers
Creative Reporting Artists
Photographers
Recorders
Designers
Broadcasters
Electronic Servicemen and Technicians
Scientists
Computer Programmers and Operators
Telegraph and Teletype Operators
Telegraph and Teletype Servicemen
Telephone Operators
Telephone Servicemen
Telephone Linemen

FOURTH EXPERIENCE LEVEL

Occupational Cluster: Marketing and Distribution

Major Project: Salespeople, including wholesale and retail salespeople, door-to-door salespeople, realtors

Subject Matter: Social Studies, Language Arts, Math

Subject Matter Focus: Social Studies
- Map skills
- Human Interaction
- adaptability to situations

Subject Matter Focus: Language Arts
- Conversation skills
- vocabulary of trade
- Interviewing skills
- Critical thinking
- Inventory skills

Subject Matter Focus: Math
- Money, making change
- Loans, interest, mortgage
- Making out a sales ticket
- Figuring State sales tax

Career Development Concepts:

Dimension

C.B. - Certain behaviors are appropriate to specific job settings.
D.M. - Decision making involves risks.
C.B. - Some skills can be transferred from one job to another.
C.B. - An individual should learn to cope with the rights and feelings of others.
L.S. - Moral principles are an integral part of one's work life.
S.D. - An individual is influenced by economic forces.
E.A. - Career-oriented learning may take place in school or out of school.
A.A. - A given work setting requires certain policies and procedures.

Teacher Goals:

1. Examine the careers of salespeople.
2. To relate some of the duties and responsibilities of a salesperson.
3. To help students realize that there are varying types of sales jobs.
4. To critically analyze various advertisements.
5. To relate concept of inventory as a job of a salesperson.
6. Help children to consider how values, knowledge, and attitudes contribute to choices in housing.

7. Help pupils relate what academic skills are needed by various sales jobs.

8. Help students realize how integrity, and moral standards are needed in a sales job.

Pupil Performance Objectives:

1. The student will make a comparison between the career of a salesperson and a career he might choose.

2. The student will read a newspaper advertisement and state what is fact and what is opinion.

3. The student will view television advertisements and state what is fact and what is opinion.

4. The student will label teacher-given statements as fact or opinion.

5. The student will list three different types of salespeople.

6. The student will describe the difference between salary and commission.

7. The student will be able to inventory in a given situation.

8. The student will describe at least two reasons given by parents or a neighbor for their choice of present housing.

9. The student will identify academic skills used by a real estate salesperson or any other salesperson in his/her work.

Suggested Activities:

1. On a local map, identify and label establishments involved in sales.

2. Talk about various types of advertising.

3. Clip articles from the newspapers, sort statements into fact and opinion categories.

4. Make up advertisements for a self-invented product; for the newspaper, radio, T.V., billboard.

5. Use a newspaper, circle with blue the fact statements found, circle with red the opinion statements facts.

6. Role-play the part of a:
    A. Car salesperson
    B. Salesperson in a shoe store
    C. Realtor
    D. Salesperson of wholesale items
    E. Door-to-door salesperson
    F. Salesperson in a home (i.e. Avon, Stanley, Tupperware)

7. Have one or more types of salespeople come to the classroom to be interviewed by the students.

8. Take a field trip to a realtor's. The realtor could possibly show a piece of property as he/she would to a prospective buyer.

9. Inventory the classroom.

10. Worksheets in Coping Behaviors Dimension Guide, pages, 292, 296.

11. Worksheets in Decision Making Dimension Guide, pages 293-294, pages 299-300, pages 305-306.

12. Send two or three students to a retail store in the community.

Suggested Vocabulary:

Salary
Inventory
Clerk
Loan
Deed
Real property
Collateral
Commission
Evaluation
Merchandise
Specifications
Appraisal
Mortgage
Tally
Retail
Title
Interest
Lease
Principal

Suggested Human Resource:

Various sales personnel from the community (see human resource file)

Materials:

Air Cargo - Transportation and Trade Series, June Behrens, Children's Press, 1970
Truck Cargo - (see above)
Ship Cargo - (see above)
Careers in Auto Sales and Service - Christopher Benson, Lerner Publications Company, 1974
Real Estate Agent - Yellow Pages Career Library, Murphy Levy Wurman, 1974.
Coping Behaviors Dimension Guide - Peterson, Jackson, Tausig, Sutherland, Barford, 1974.
Decision Making Dimension Guide - Peterson, Jackson, Tausig, Sutherland, Barford, 1974.
Job Opportunities In A Department Store - Sound filmstrip from Job Opportunities Now - Group 1 Singer.
Retail Salesworker - 4 cards from the "Careers: A Supplemental Reading Program" box, Harcourt Brace Jovanovich-

FOURTH EXPERIENCE LEVEL

Occupational Cluster: Business and Office

Major Project: Secretary

Subject Matter: Language Arts, Social Studies, Science, Math

Subject Matter Focus: Language Arts
- Handwriting
- Alphabetizing
- Following written directions
- Operating machines
- Telephone manners and usage
- Letter writing
- Filing skills
- Creative writing

Subject Matter Focus: Social Studies
- Interactions between boss and employees
- Problem solving

Subject Matter Focus: Science
- How machines in offices work
- Using duplicating fluid
- Electrical requirements for operating machines
- Production of paper
- Production of erasers, pencils, pens, etc.

Subject Matter Focus: Math
- How to set up letters
- Planning and setting up charts
- Making charts on ditto masters

Career Development Concepts:
- C.B. - Certain behaviors are appropriate to specific job settings.
- C.B. - Performance requirements for a job may change with time.
- D.M. - Decision making involves risk.
- L.S. - Moral principles are an integral part of one's work life.
- S.D. - An individual is influenced by economic forces.
- S.D. - Achievements in school and out of school are often dependent upon interests, aptitudes, and values.

Teacher Goals:

1. Encourage appreciation of knowledge and skills needed by a secretary.

2. Examine the career of a secretary.

3. Familiarize students with other jobs in the business office cluster.

4. Familiarize students with the training necessary to become a secretary.

5. Give children the opportunity to see the equipment and machines a secretary uses.

6. Allow children to do role playing (secretary, boss, customer, client, etc.)

Pupil Performances:

1. The student will be able to alphabetize correctly for filing purposes.

2. The student will write business letters correctly.

3. The student will play the role of secretary, boss, customer, client, etc.

4. The student will plan and make ditto masters and run them off.

5. The student will recognize and be able to name common office equipment used by a secretary.

Suggested Activities:

1. Visit the school secretaries (small groups) and watch them as they work.

2. Students can interview secretaries.

3. Practice filing alphabetically.

4. Write business letters using correct forms.

5. Make ditto masters and use the machine, after instruction, to run them off.

6. Role play - A boss dictating to a secretary

7. Role play - A secretary writing down telephone messages.

8. Do research into the cost and production of common secretarial supplies.

9. Interview the secretaries in an insurance office.

Discussion Questions:

1. What are some of the secretary's responsibilities?
2. Should secretaries be able to get along well with people?
3. Where and how do you train to be a secretary?
4. Do you think people appreciate what a secretary does?
5. What is the role of a secretary?
6. Would you want to be a secretary?
7. Is a secretary's job important?

Suggested Human Resources:

FC-M Unit Secretary
FC-M Elementary Secretary
Secretary - Smith and Johanns Insurance
Secretary - Smith and Johanns Insurance

Suggested Material Resources:

Business and Office Chart from the "When You Grow Up" series. Mini Productions, Inc. 1974
Business and Office folder from the "Career Pictures" series, Xerox Corporation 1974
Secretary (4 cards from the "Careers: A Supplemental Reading Program" box) Harcourt Brace Jovanovich
Language Arts: Who Needs It? Sound filmstrip from the series "Education: Who Needs It?", Career Futures, Inc.

Business and Office

Managers in Charge of Operations
Accountants
Bookkeepers
Computer Programmers and Operators
Secretary Specialists (executive, legal, medical)
Stenographers
Office Clerks
Typists
Machine Transcribers
Office Machine Operators

FIFTH EXPERIENCE LEVEL

Occupational Cluster: Health Occupations

Major Project: Supportive Personnel - Nurses' Aides, Orderlies.

Subject Matter: Math, Science, Language Arts, Social Studies, Art, Music

Career Development Concepts:

Major Concept: Coping Behavior
Certain identifiable attitudes, values and behaviors. Individuals can learn to perform adequately in a variety of occupations and occupational environments.

Major Concept: Decision Making
Life involves a series of choices leading to career commitments. Basic components of the decision-making process can be applied to the establishing of personal goals and the making of career-related decisions.

Major Concept: Lifestyle
Work affects an individual's way of life, in that a person is a social being, an economic being, a family being, a leisure being, and a moral being.

Major Concept: Self-Development
An understanding and acceptance of self is important. Social, economic, educational and cultural forces influence self-development. Individuals differ in their interests, aptitudes, values and achievements.

Major Concept: Educational Awareness
Educational skills and experiences are related to the achievement of career goals.

Major Concept: Attitudes and Appreciations
Society is dependent upon the productive work of individuals.

Subconcepts: Coping Behavior
There is a universality of feelings and aspirations of all people. It is important for a person to be able to make transition from job to job.

Subconcepts: Decision Making
Decision making can precipitate chain reactions. Setting goals can be enhanced by analyzing decision-making processes.

Subconcepts: Lifestyle

Relationships exist between desired lifestyles and career monetary rewards.

Subconcepts: Self-Development

Interests and abilities mature and change as well as one's physical being. Changes in an individual influence his environment and changes in environment influence him. Person can see differences in self and others in terms of interests, aptitudes, values and achievements.

Subconcepts: Educational Awareness

Knowledge and skills in subject matter areas are helpful in occupational competence. Career-oriented learning may take place in school or out of school. Learning is a lifelong process. Learning achievement depends upon effort and ability.

Subconcepts: Attitudes and Appreciations

Completion of a worthwhile task has value for the worker and for society. Work involves the acceptance of responsibility for a task. A great many tasks can be performed by men and women. Most occupations include common expectations, such as punctuality, dependability, and avoidance of excessive absence. A given work setting requires certain policies and procedures. Specialized occupations result in an interdependent society.

Subject Matter Focus:

Math.

1. Review basic operations
2. Measurements and weights
3. Metric System
4. Numeration
5. Graphs
6. Money

Science:

1. Practical use of scientific instruments
2. Safety and first aid
3. Scientific analysis of charts and graphs
4. Observation and deductions of data

Language Arts:

1. Vocabulary & Spelling
2. Descriptive paragraphs
3. Oral Reports
4. Letter Writing
5. Interviews
6. Creative Writing
7. Library skills and research investigations
8. Demonstrations

Social Studies:

1. History of Medicine
2. Important people in medicine
3. Interrelationship of workers
4. Committee work-Cooperation in projects

Art:

1. Designing symbols
2. Murals
3. Crafts

Music:

1. Health and Safety songs and activities

Teacher Goals:

1. Provide experiences for students to have duties related to those of the nurses' aides and orderlies.
2. Develop awareness for the importance of the work of each hospital helper, regardless of extent of training.
3. Instill appreciation for the fact that all personnel must work together in the operation of the hospital community.
4. Increase perception of priorities and orderliness in the functioning of the hospital workers.
5. Provide information about skills, knowledge, equipment and special training needed for the work of the aides and orderlies.

6. Invite professionals or parents to share the study, Patients.

Pupil Performance Objectives:

1. Given a list of careers, the student will be able to choose those that are related to Health Occupations.

2. The student will be able to select one of the Health Occupations and discuss why he has/has not an interest in that particular career.

3. Given a list of Health Occupations, the student will choose one and name at least four responsibilities related to it.

4. The student will be able to take part in the dramatization of the duties of one of the Health Occupations.

5. The student will show understanding of vocabulary related to the Health Occupations.

6. The student will demonstrate that he can design a safety poster and tell why he selected a certain subject.

7. The student will be able to participate in a discussion of present and future opportunities in the Health Occupations.

8. The student will relate the duties, responsibilities, and rewards of being in the Health Occupations of nurses' aid or orderly.

9. The student will be able to identify specific instruments and equipment used in the Health Occupations.

10. The student will demonstrate certain skills with equipment used in the Health Occupations.

Suggested Activities:

Math: ELSI Unit II - Heat

1. Thermometers as a numberline
   Practice using various kinds of thermometers by taking body temperature, room temperatures (different places in the room) outdoor temperatures (various locations).

2. Use coordinate graphs to record Celsius-Fahrenheit readings.

3. Take temperature of various solutions as, alcohol, salt.

4. Scales and balances as numberlines
   Make a chart of personal height and weight over a period

of time, (may use records from files-birth certificates). Construct a class chart of height and weight using the metric measurements.

5. Use medical supply catalog to make an order for First Aid supplies.

6. Prepare a chocolate pudding recipe by weighing ingredients, then cooking and weighing the final product.

7. Bandage and treat certain types of wounds and discuss the procedures used.

8. Distinguish between good and poor menus.

Social Studies:

1. Research to learn of the origin and meaning of the medical profession symbol.

2. Follow the path of a particular patient from admittance to dismissal.

3. Design an efficient assembly line for filling trays for patients.

4. Make fingerprints of each child to show that every one is different.

5. Do a report on famous medical people, i.e. "Who is Joseph Lister?"

6. React p. 648 SD - "People I Know".

7. Name three different workers who help others to rest and relax.

Art:

1. Design a symbol for the paramedics.

2. Make tray favors for special events or holidays.

3. Paint a Medical Mural for the room.

Language Arts:

1. Compose a short story -- "The Most Important Person In Medicine was __________"

2. Make a dictionary of new health terms learned. Jingles and Riddles.

3. Write letters to hospital patients.

4. Write business letters to get information from various health organizations (see Yellow Pages Career Library) Nurse, Natl. Assoc. of Elem. School Principals.

5. Make a tape recording of an interview with a shut-in or nursing home resident.

6. Take a piece of cast and write a story about it.

Music:

1. Show how music can be used for medical therapy.

Science:

1. List 5 ways aides or orderlies make their working environment clean and sanitary. Why is cleanliness so important in a hospital?

2. Have Mr. Bruce Axtel (Tri-County Public Health Dept.) do bacteria cultures for each student.

3. React P.213 CP-History of Cleanliness.

4. Take your pulse and blood pressure. Compare with your classmates.

Additional Activity:

All:

1. Develop a "hands on" activity Box.

Suggested Discussion Questions:

1. Why do you think anyone would want to become an aide or orderly? (rewards).

2. What are any differences in the work of an aide or orderly?

3. Name what you feel would be good characteristics of any aide or orderly.

4. Why would someone choose to become an aide or orderly rather than a nurse or doctor?

5. Where are the jobs where these people work?

6. What would be the lifestyle of a person doing this work?

7. What special dress is required?

8. Could this experience be transferred to other fields of work?

9. What special care must an aide or orderly use with the instruments they work with?

10. Discuss the history of medicine in the United States.

11. Why is it important to follow doctors directions?

12. What health services do we have in Farmer City-Mansfield?

13. Watch Dr. Welby and discuss medical people and techniques used.

Material Resources: Health Occupations-Nurses' aides, Orderlies

Books:

Benefic Press Westchester, Il: Alike and Different, Careers for All
M. Davis, Lerner Publications, Minn: Careers in a Medical Center
Career Pictures, Career Awareness Program: Health Weekly Reader
Career Pictures, Career Awareness Program: The Hospital
Wilkinson and Levenson, Sextant Systems, Milwaukee, Wis.: Come to Work with Us in a Hospital
Chilton, Children's Press: Everyone Has Important Jobs to Do.
Eleanor Kay, Franklin Watts, Inc.: Health Care Careers
Benefic Press, Westchester, Il: Interests and Choices, Careers for All
Yellow Pages Career Library, Nat'l. Assoc. of Elem. School Principals: Nurse
Freeman, Westover & Wills, Children's Press: On the Backup Team in Medical Work
Freeman, Westover & Willis, Children's Press: On the Scene in Medical Work
Eleanor Kay, Rn, Franklin Watts, Inc.: The First Book of Nurses
Arthur Shay, Reilly & Lee, Chicago: What Happens When You Go to the Hospital
Arthur Shay, Reilly & Lee, Chicago: What It's Like to Be A Nurse

Filmstrips:

1. Check In, Check Up, Career Kaleidoscope
2. I have a Body, Singer, SVE, Chicago, Il.
3. Job Opportunities in the Hospital, Singer, SVE, Chicago (excellent).
4. Susan Goes to the Hospital, Educational Activities, Inc., Freeport, N.Y.

Films:

1. Mr. Galen Comes to Town, Modern Talking Pictures Series
2. The Heritage of Operating Room, Modern Talking Pictures Series
3. The Hospital, The Surgeon and You, Modern Talking Picture Series
4. The Pursuit of Cleanliness, Association Sterling
5. Portrait of an Internist, Association Sterling
6. An Investment in Home Safety, Association Sterling
7. The Menu Planner, Association Sterling.

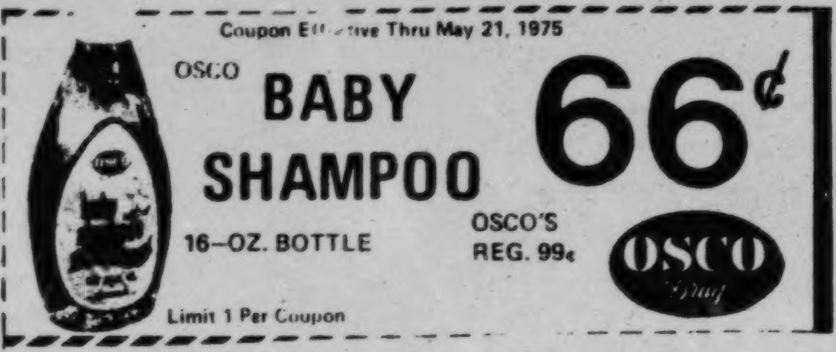
Educational Television:

1. Bread and Butterfly Series

React Pages: The Center for Educational Studies School of Education, Eastern Ill. University, Charleston, Il.

1. Coping Behaviors Dimension Guide
2. Self-Development Dimension Guide

Activity Cards


Coupon Effective Thru May 21, 1975

OSCO **BABY SHAMPOO**

66¢

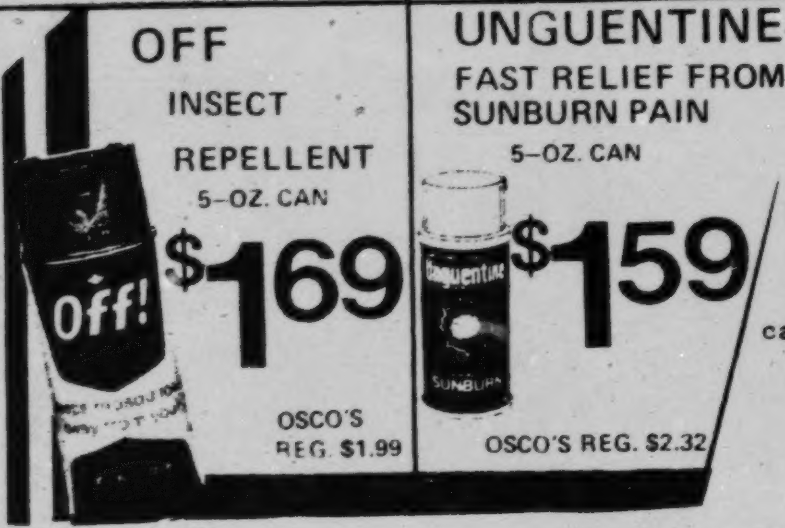
16-OZ. BOTTLE

OSCO'S REG. 99¢

OSCO Drug

Limit 1 Per Coupon

What workers might care for a new-born baby? If you can remember a new baby in your family, tell about the day that he came to your home.


OFF

INSECT REPELLENT

5-OZ. CAN

$169

OSCO'S REG. $1.99

UNGUENTINE

FAST RELIEF FROM SUNBURN PAIN

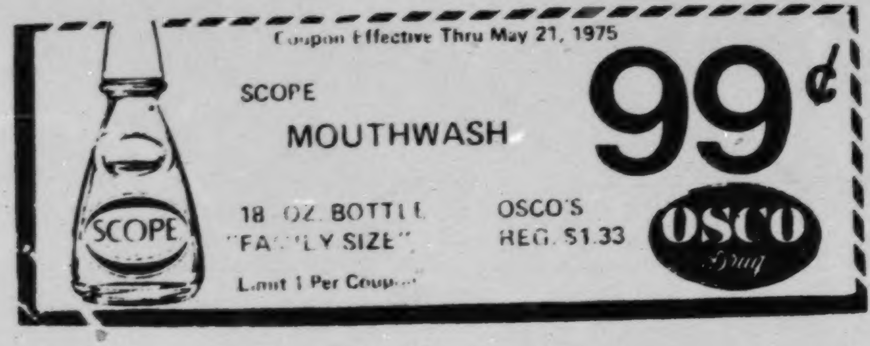
5-OZ. CAN

$159

OSCO'S REG. $2.32

Describe situations in which these products might be needed.

Where would you like to go camping? For a picnic? Why?


Coupon Effective Thru May 21, 1975

SCOPE

MOUTHWASH

99¢

18-OZ. BOTTLE "FAMILY SIZE"

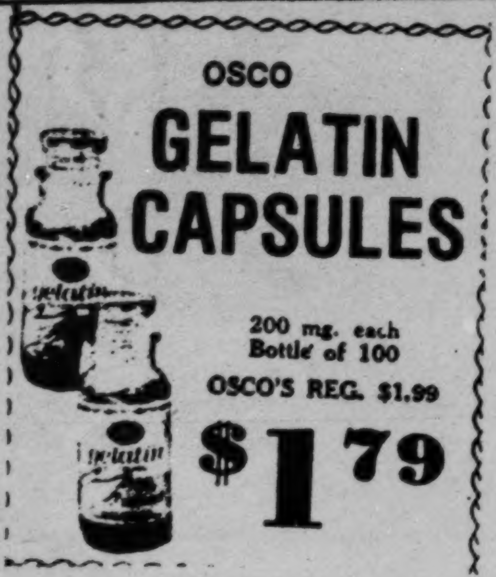
OSCO'S REG. $1.33

OSCO Drug

Limit 1 Per Coupon

What would be the saving on one bottle of mouthwash? Write an advertisement for this product.

Activity Cards



OSCO

GELATIN CAPSULES

200 mg. each
Bottle of 100

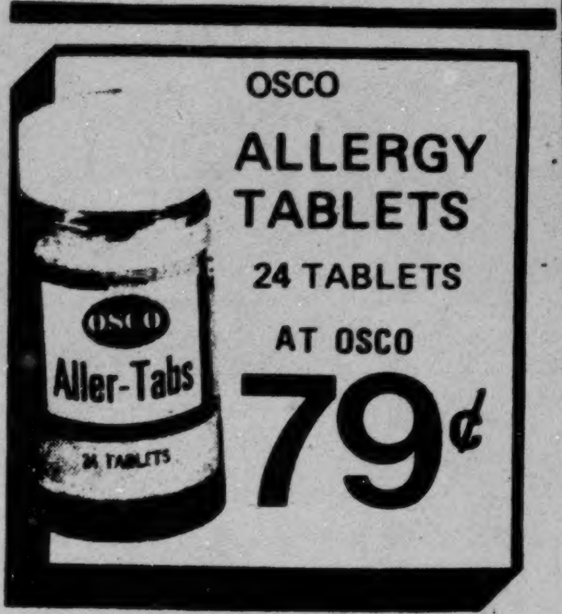
OSCO'S REG. $1.99

$1.79

WHAT WOULD BE THE COST OF 500 GELATIN CAPSULES?

HOW MANY CAPSULES WOULD BE EQUIVALENT TO 1000 mg.?

HOW MANY MILLIGRAMS IN ONE GRAM?



OSCO

ALLERGY TABLETS

24 TABLETS

AT OSCO

79¢

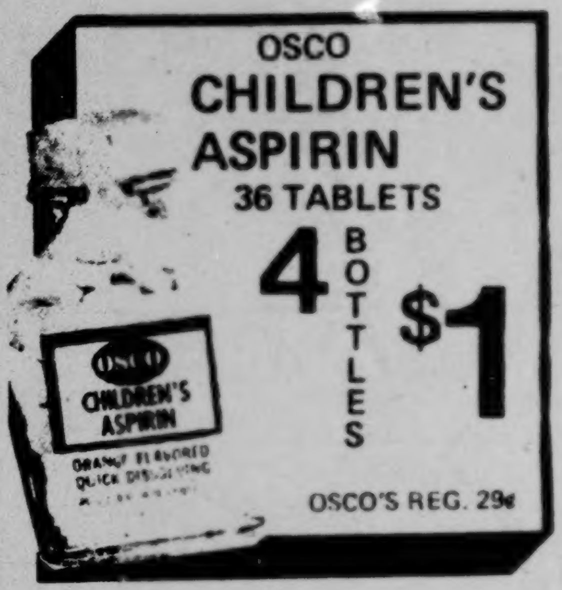
OSCO
Aller-Tabs
24 TABLETS

Find out what you can about allergies and report to the class.

What is meant by an allergy test?

Would 4 bottles contain more or less than 100 tablets?

Activity Cards



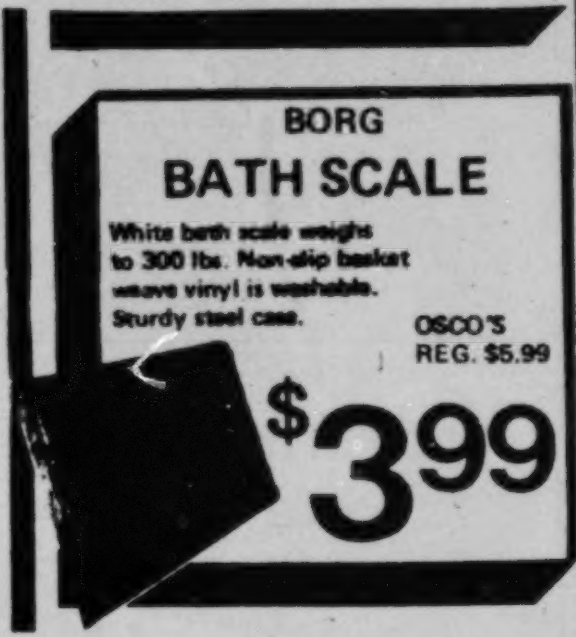
OSCO
CHILDREN'S ASPIRIN
36 TABLETS
4 BOTTLES $1
OSCO'S REG. 29¢

OSCO
CHILDREN'S ASPIRIN
ORANGE FLAVORED
QUICK DISSOLVING

List some safety care that should be used with Children's Aspirin.

How many tablets in the 4 bottles?

What does 1¼ grain mean?

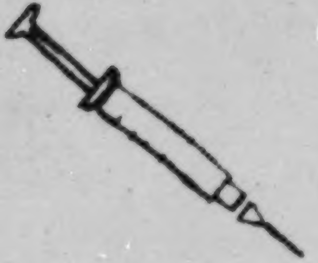


BORG
BATH SCALE
White bath scale weighs to 300 lbs. Non-slip basket weave vinyl is washable. Sturdy steel case.
OSCO'S REG. $5.99
$3.99

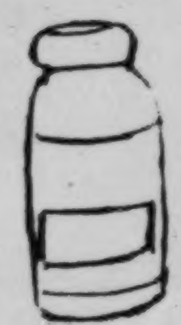
Weigh yourself and 4 of your classmates. Make a bar graph to show the weights.

If it is possible, find out what you weighed at birth. How much has your weight increased?

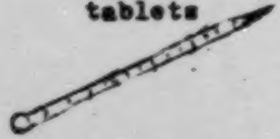
MEDICAL TERMS



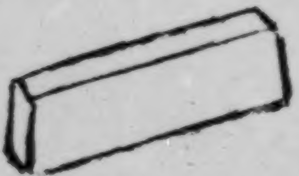
syringe



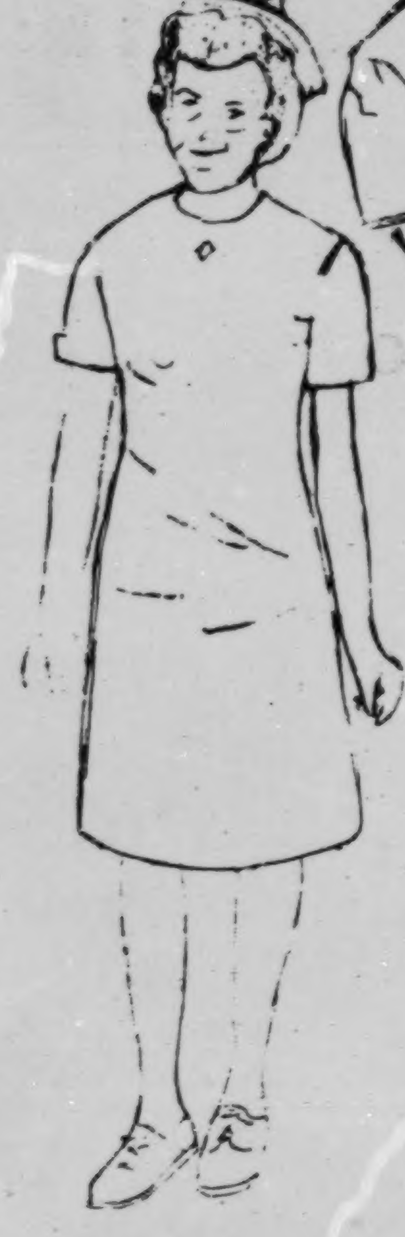
tablets



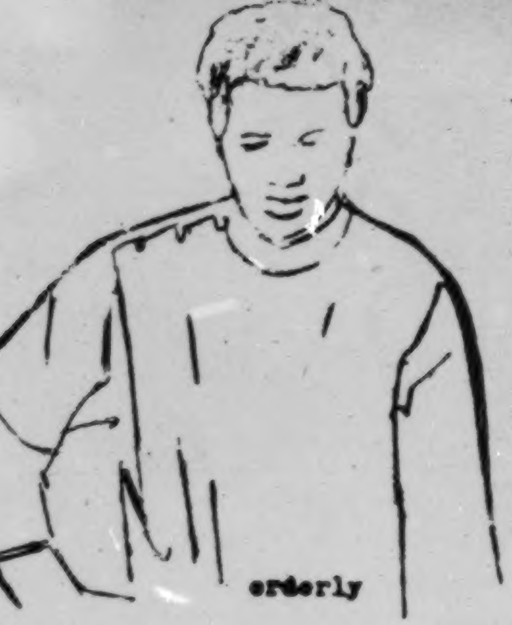
thermometer



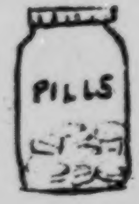
bandage



nurses' aide

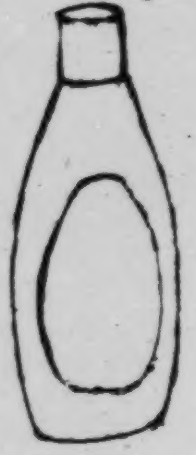


orderly

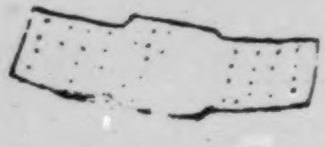


perscription

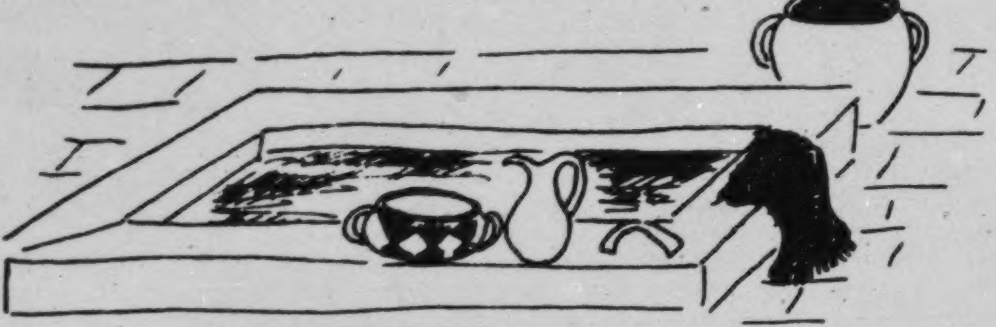
DOSE



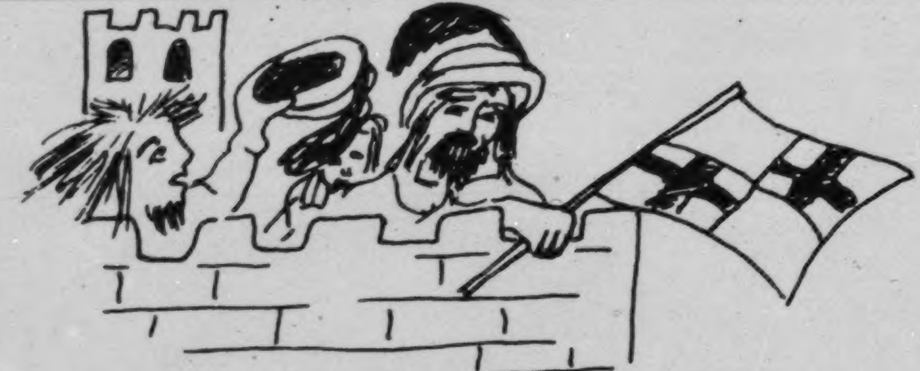
lotion



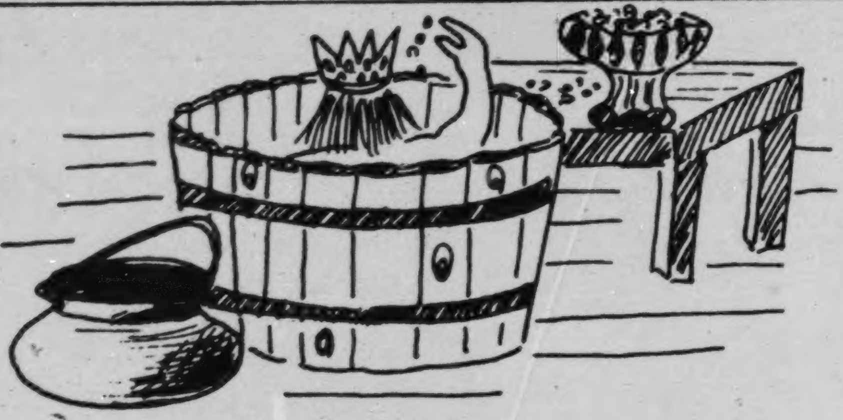
HISTORY OF CLEANLINESS



100 B.C. A public bath in Rome. An attendant uses oil, sand, and a scraper because they had no soap.



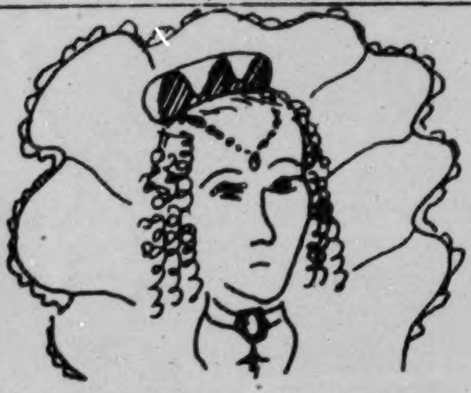
1565 The Siege of Malta was won by the Knights of St. John. The knights knew how to use soap and water to clean their wounds and get well. Their enemies, the Turks, died from wounds because they didn't know how to clean them.



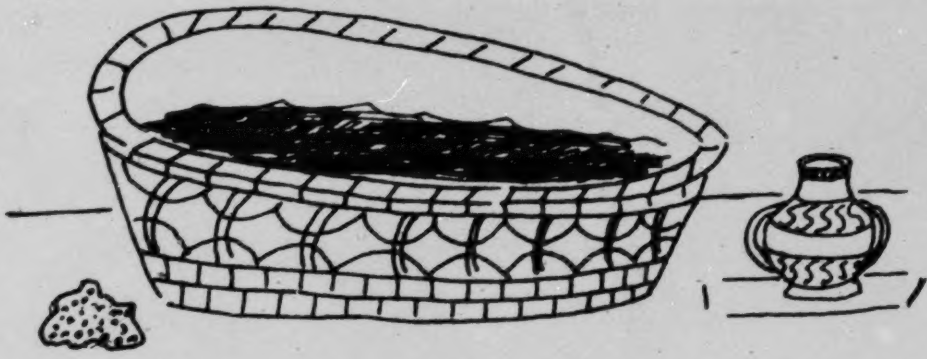
1200 King John used rose petals but no soap to bathe once every three weeks.

HISTORY OF CLEANLINESS

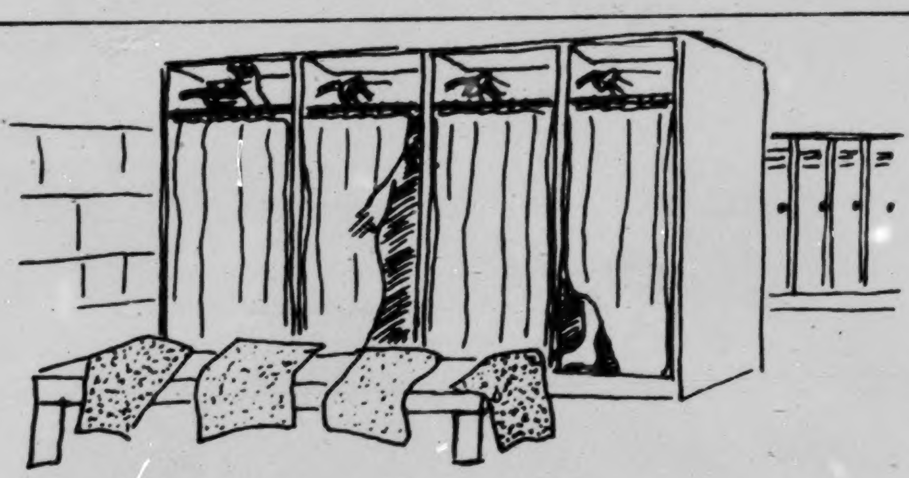
Cut out these pictures. Arrange them in a time line to show past and present events in keeping clean. Add pictures of modern tubs, showers, brushes, and soaps. Show astronauts brushing their teeth in a space ship. If you like, put in other pictures to show ways of bathing in history.



1600 Queen Elizabeth kept her mouth closed when her picture was painted. Her teeth were black.



1000 B.C. The bathtub of King Nestor of Greece



1950 Football players shower after a game.

ALL KINDS OF BABIES

Every baby in the day care center is different. Every boy and girl is different. Find out about yourself and nine other boys and girls in the class when they were babies. Fill in this chart.

Name	Weight at birth	Length at birth	Weight now	Height now

What is a normal weight for a newborn? __________

What is a normal length for a newborn? __________

What is a normal weight for an 8-year-old? __________

What is a normal height for an 8-year-old? __________

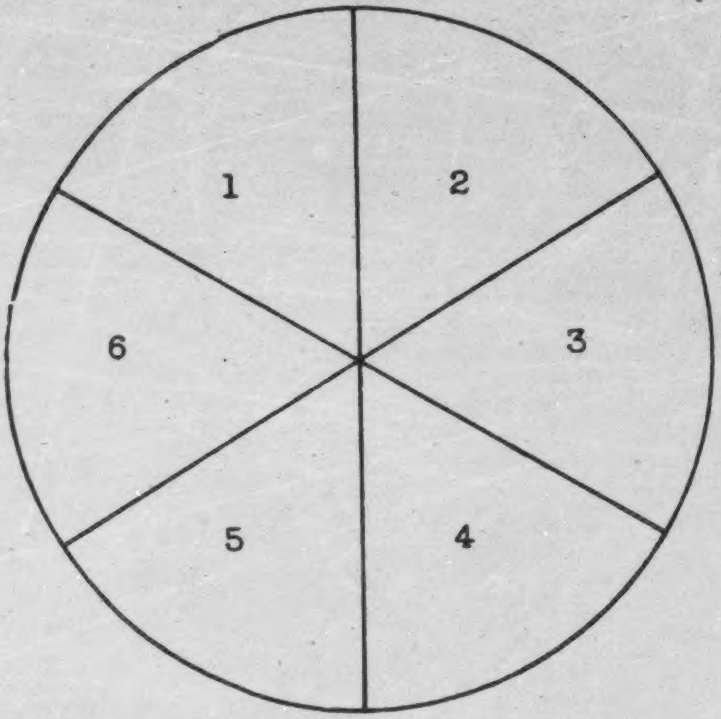
See if your chart is like others in the class.

PEOPLE I KNOW

Fill in the blanks with names of people you know.

______________________ is very young.
______________________ is old.
______________________ is a great cook.
______________________ is someone you can laugh with.
______________________ likes to read.
______________________ looks colorful.
______________________ likes to run.
______________________ sleeps late.
______________________ seems sad.
______________________ always picks hamburgers.
______________________ would rather eat hot dogs.
______________________ gets up early.
______________________ is a cookie monster.
______________________ always thinks of something to do.
______________________ has silky hair.
______________________ is afraid of the dark.
______________________ is a great catcher.

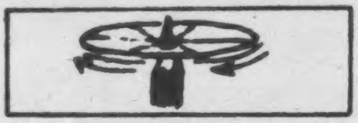
A COLORWHEEL OF MYSELF



Color the sections of the wheel. Use bright colors.

Color section 1 the color of your eyes.
Color section 2 a color you are wearing.
Color section 3 the color of your skin.
Color section 4 another color you are wearing.
Color section 5 the color of your hair.
Color section 6 another color you are wearing.

Cut out the wheel. Paste it on heavy backing paper.



Spin it on a pencil. The colors will look pretty together. Does anyone else have a colorwheel like yours?

RANK ORDER

CHILDREN

1. Which would your job preference be?

_____ hard and dirty work at $80 per week

_____ clean and easy work at $40 per week

_____ dirty but easy work at $60 per week

2. Which would you least like to be?

_____ a prison guard

_____ a garbage collector

_____ an assembly line worker

3. Which would you least like to do?

_____ be a hangman

_____ be a member of a firing squad

_____ be an executioner in a penitentiary

4. In which of these situations would you be most likely to take some action?

_____ a car is parked with its headlights on in broad daylight

_____ a dog has scared a kitten up a telephone pole

_____ some big boys are trying to tie tin cans to the tail of a dog

Take from: VALUES CLARIFICATION

Sidney B. Simon
Leland W. Howe
Howard Kirschenbaum

Hart Publishing Company, Inc.
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FIFTH EXPERIENCE LEVEL

Occupational Cluster: Agri-Business and Natural Resources

Major Project: Forest Ranger

Subject Matter: Social Studies, Language Arts, Science, Math

Subject Matter Focus:

Social Studies:

1. Geographic areas
2. Job responsibilities
3. Public relations
4. Natural Resources
5. History of National Parks

Science:

1. Wildlife-Conservation
2. Soil Erosion
3. Related fields of study
4. Identification of trees, seeds
5. Instruments used by forest rangers
6. Ecology

Math:

1. Measurements
2. Numerations

Language Arts:

1. Reports
2. Descriptive paragraphs
3. Business letters

Teacher Goals:

1. Expand pupils awareness of the role of the forest ranger as one of the cluster of environmental control occupations.

2. Encourage pupils to relate their own aptitudes and interests to the activities, requirements, and skills of the work done by forest rangers.

3. Increase pupil awareness of the importance of conservation decisions in reaching responsible goals for forest resources.

4. Help pupils to relate forestry knowledge and skills to other occupations.

5. Structure experiences in which pupils can use their scientific knowledge to take part in the decisions and activities of a forester.

Pupil Performances:

Career Information:

1. The student will relate and discuss the duties, responsibilities and rewards of the forest ranger.

2. The student will be able to list the requirements for becoming a forest ranger.

3. The student will be able to name other types of jobs in the Agri-Business Cluster.

4. The students will identify state and national forests in Illinois and place on map.

Decision Making:

1. The student will relate how rangers work with wildlife and soil conservationists.

2. Identify chain reactions that result from forest fire.

Self Development:

1. Relate how a ranger works with game wardens.

Coping Behaviors and Educational Awareness:

1. Explain how environmental changes require new knowledge and skills.

Attitudes and Appreciations:

1. Identify particular contributions to society made by forest rangers.

Suggested Activities:

Social Studies:

1. List skills required by a forest ranger.
2. Chart the major forest regions of the U.S., Illinois.
3. Draw a map of a forest (use pamphlet).
4. List ten natural resources within local area (a radius of 50 miles).

Math:

1. Measure the tallest tree in the school yard. Using the shadow method.
2. Determine the age of a tree by counting the growth rings.
3. Measure land area of school yard, room, etc.

Science:

1. List other areas of science that a forest ranger must be familiar with.
2. Identify tree leaves, seeds, etc. (ditto sheet)

Language Arts:

1. Smoky's Helper sheet.
2. Write letters to Dept. of Conservation requesting information.

Discussion Questions:

1. Who hires a forest ranger? Who pays his salary?
2. What dress code does a forest ranger have?
3. What special tools does a forest ranger use?
4. How does a forest ranger work with the public?

5. How does a forest ranger conserve wildlife?

6. What is erosion? Which types of erosion would a forest ranger have to deal with?

7. How do forest rangers count the wildlife? (see related story) 1975 Almanac.

8. How does a forest ranger and a game warden work together?

9. What other jobs can you name that are associated with the forest ranger?

10. What are ways we can prevent forest fires?

11. What are good safe camping practices campers should follow to preserve our forests and parks?

12. What do you think the forest rangers duties and skills will be in the year 2000?

Resource Materials:

Awareness Program, Agri-Business, Career Pictures, Weekly Reader Career
Floethe, Louise Lee, Scribner, 1962, Forest and Forestry
Wall, Gertrude Wallace, Scribner 1952, Forest Products
ESLI Series, Rand McNally and Co. 1975 Unit 5 (Geological Processes), Learning by Investigating
McDonald Corporation, 1973, McDonald's Ecology Action Pack
National Wildlife Federation, Ranger Rick's Nature Magazine
Magazine, National Wildlife
Coronet Films, 1968 (filmstrip and sound), Learning about Conservation

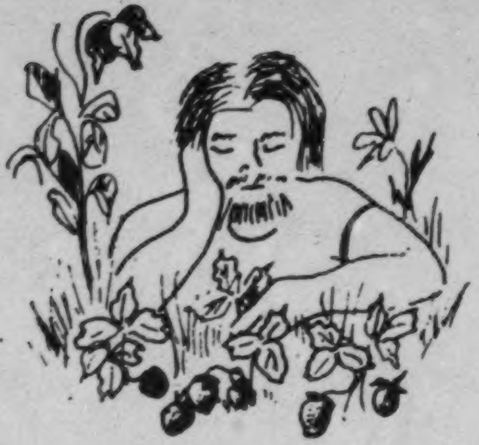
Films:

The Forever Living Forest, Association-Sterling
A Question of Hunting-MTS*
Before you Hunt, MTS
Golden Harvest, MTS
Rewarding Career in a Dynamic Industry-Agriculture, Modern Talking Pictures Service
The Foresters, MTS
Fresh Country Apples, MTS
The American Farmer, MTS

*MTS-Modern Talking Picture Service

INTRODUCING:

NATURAL NORRIS



Norris makes few plans--likes to let things happen naturally. You might expect him to be: (Check)

on time ____

happy ____

forgetful ____

hard working ____

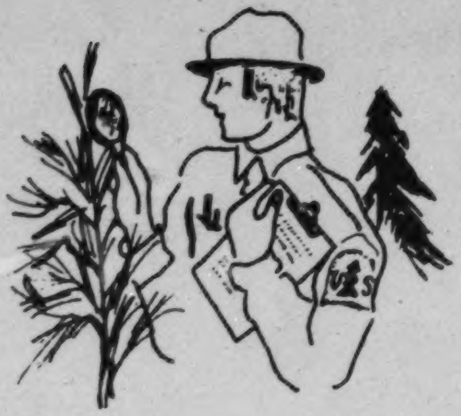
neat ____

friendly ____

reaching goals ____

(put your own idea) ____

PLANNING PAT



Pat thinks ahead, makes lists, works on schedule. You might expect him to be: (Check)

on time ____

happy ____

forgetful ____

hard working ____

neat ____

friendly ____

reaching goals ____

(put your own idea) ____

What things do you like to let happen naturally? When do you like to have plans? Answer in a short paragraph on the back of this page. Discuss you answers with a classmate. How were your ideas alike? Different?

JOHN MUIR: FATHER OF THE NATIONAL PARKS

Vocabulary: wilderness, inventions, whittles, pendulum, carriages, Yosemite Valley, sequoia, petrified, glacier

In 1849, 11-year-old John Muir traveled with his family all the way from Dunbar, Scotland, to settle in central Wisconsin. Wisconsin was then a green wilderness. For eight years young John helped his father clear the land and break the soil for farming. Finally John decided to ask his brother-in-law for 40 acres of land--but not to clear for farming. John wanted to save the wilderness and all the wild animals, trees, ferns, and flowers in it. He wanted to fence the land so that no farm animals could break in. This land was John Muir's first plan for a park. It would be a place for people to see and enjoy, not cut and spoil, the fine plants and animals that lived there. But, young John never had the money to buy this Wisconsin land from his brother-in-law.

Meanwhile Muir was becoming well known in Wisconsin for his inventions. He whittled a whole clock and its gears by hand. He made a great clock to hang in a tree with a rock pendulum 14 feet long so workers would know the time to come in from the fields. He made a bed that tipped out the sleeper when it was time to get up. People who saw John's inventions at the Wisconsin State Fair in 1860 wanted John to work for them, but he decided instead to go to college. He was hungry to learn and went to all the classes he could to study plant science, animal science, and earth science. He also began feeling an urge to wander in the wild. He went for long, long wilderness hikes to quietly study trees, plants, rocks, birds, and animals.

But when John was offered a good job making carriages he made a practical decision. He would leave his wandering and earn some money. He was successful at his work. His inventions helped the carriage maker and business improved. Then one day a long metal file slipped out of John's hand and cut into his right eye, blinding it. He stood the pain, but when the left eye began to go blind too, he was suddenly filled with the fear that he might never see a wilderness again. Then he decided that if his sight ever came back, he would give up the inventions of men and study only the inventions of nature.

The light slowly came back to both his eyes and John kept his promise to himself. Later he said, "I might have become a millionaire, but I chose to become a tramp." He set out on foot through the great forests of America. He took only a small bag with a brush and comb, soap and towel, clean underwear, a book of poems, and a Bible. He kept careful notes about what he saw and sent back many letters and articles for newspapers. He discovered the rare beauties of the Yosemite Valley in California, the giant sequoia trees, the petrified forest in Arizona, the Grand Canyon, and Glacier Bay in Alaska. President Theodore Roosevelt took a camping trip with John Muir and thought it was a great honor to explore the wilderness with him. After this trip, President Roosevelt urged Congress to pass many bills to save great regions of forests for our national parks. Today we remember John Muir as the Father of our National Parks. He was a special person who could sign his name and address: John Muir, Earth Planet, Universe.

List three key decisions in the life of John Muir:

1. ____
   ____
2. ____
   ____
3. ____
   ____

John Muir studied in two kinds of places. These were:

1. ____________________ 2. ____________________

Find the places John Muir traveled on a map of North America.

HELP SMOKEY FIND HIS FRIENDS, PLEASE.

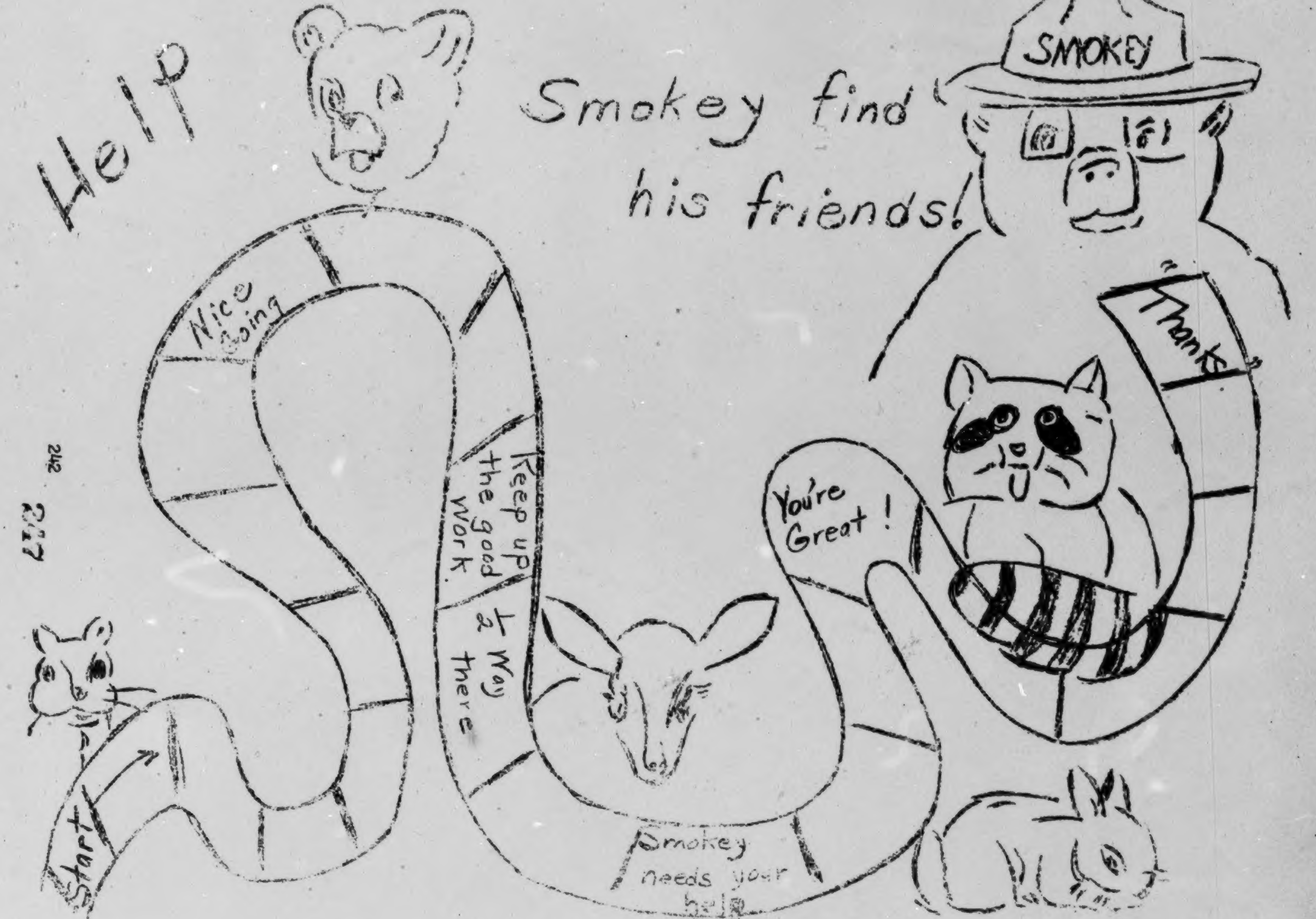
Move along the path as you make the points listed below. Have the teacher check your points before you mark them. Each section in the path earns 5 points for you. Good luck to your 100 point mark!

	Points	Project
1.	20	Read an animal book and fill out a summary card or tell about it.
2.	10	Tell something from National Wildlife on tape.
3/.	10	Read a Ranger Rick story.
4	20	Make a report on animal tracks
5.	10	Design an Ecology Poster (Protecting animals.)
6	10	Report on Pet Care.
7.	20	Make an animal game and teach it to friends.
8.	10	Report on animal classification.
9.	10	Watch 2 animal film strips.
10.	20	Write "My Own" animal story.
11.	10	Draw an animal picture.
12.	20	Write a play about animals.
13.	20	Report on work related to animals. (occupations)
14.	10	Write a letter to a friend and tell about a pet.
15	10	Write to the Department of Conservation and ask for material about wildlife.

HAVE YOU REACHED **100** points?

eated by Beth [illegible] 5th grade, Mansfield Elementary School, Mansfield Illinois

Help Smokey find his friends!


SMOKEY
"Thanks"
You're Great !
Smokey needs your help
Keep up the good work.
½ Way there
Nice Going
Start

FIFTH EXPERIENCE LEVEL

Occupational Cluster: Transportation

Major Project: Tour Bus Driver

Subject Matter: Math, Science, Social Studies, Language Arts, Art

Teacher Goals:

1. Help students to become aware of the role of the bus driver in the total area of transportation.
2. Plan experiences so that the students can appreciate the responsibilities and rewards of the tour bus driver.
3. Provide opportunities for the student to use the knowledge that must be practiced in the position of the bus driver.
4. Strengthen understanding of the importance of some workers' jobs to provide pleasure and recreation for people.
5. Develop an activity so that the students can role play a tour with a bus driver.

Student Performance Objectives:

1. The student will relate the duties and responsibilities of the bus driver.
2. The Student will tell what the possibilities are for women tour bus drivers.
3. The student will discuss bus drivers flexibility in time scheduling.
4. The student will state the needs for bus regulations.
5. The student will identify some of the bus regulations for Illinois.
6. The student will list materials and equipment handled or used by the tour bus driver.

7. The student will apply map reading skills to the work of the bus driver.

8. The student will cooperate with classmates to use road maps to plan a tour.

9. The student will state what your feelings are about a bus driver.

10. The student will discuss the interdependence of the tour bus driver and other workers.

Student Activities:

Social Studies:

1. Prepare profiles on various inventors who added to the field of transportation.

2. List all the different kinds of transportation used to get a "baseball bat" to your backyard.

3. Working with a committee, plan a tour to your favorite spot in the United States.

4. Participate in a skit of a group of tourists in a state park.

Language Arts

1. Write a story about Betty or Bruce Bus driver in the year 2000.

2. Write a short poem about the work of the bus driver.

3. Create a story about different kinds of transportation using descriptive words to create sounds as: zoom, roar, hum.

4. Collect tour brochures and posters from tour agencies.

Art:

1. Sketch a picture of the bus of the future and describe some of its characteristics.

Math:

1. List all the costs that go into the operation of a tour bus.

Material Resources:

Books:

Transportation Weekly Reader Awareness Program, Career Pictures.
Random House Book Company, 1958, Look-It-Up-Book of Transportation
Yellow Pages Career Library, Transport Driver
Children's Press 1968, Travel by Land
The Illinois Office of Education, booklet, When Riding Your School Bus.
Barr, Chapin, Whitman and Co. 1967, Wings and Wheels

Films:

16 mm film, Modern Talking Pictures Service, The American Way.
Multi-Media Productions Inc., slides; Discovery Packet "The Rise of Industrial Cities"
SVE Educational Filmstrips (filmstrip and sound) "The Ecological Crises"
Eyegate-Filmstrip Series, filmstrip and sound; "Learning the New International Road Signs"
16 mm film, Modern Talking Pictures Service, Snowmobile Safety Savy
SVE Educational Filmstrip Series, Targo Explores the World of Work, "Where's the Ice Cream?"
Children's Press (filmstrip and sound), Work World of Wheels

FIFTH EXPERIENCE LEVEL

Occupational Cluster: Manufacturing

Major Project: Blue Jeans Construction

Subject Matter: Math, Science, Social Studies, Language Arts

Subject Matter Focus:

Math:
1. Measurement
2. Word problems

Science:
1. Inventions
2. Machines

Social Studies:
1. Flow charts of mass production
2. Geography-land use
3. Inventors
4. Environmental conditions of work
5. Labor-management relations
6. Record keeping

Language Arts:
1. Descriptive paragraphs
2. Communication skills-listening and asking questions
3. Reports
4. Vocabulary

Teacher Goals:
1. Give students insight into the interdependence of factory workers.
2. Help students to see the advantages and disadvantages of assembly line production.

3. Provide some understanding of the physical and mental requirements for a factory machine job.

4. Increase students' appreciation of the overall environment of factory work.

5. Show how workers can progress from one kind of machine operation to another phase of the project.

6. Arrange for students to visit a business where machine operators are at work.

7. Plan for students to interview a machine operator.

8. Give students an understanding of where specific raw products are produced.

Pupil Performance Objectives:

1. Name ways a worker could develop skills for his machine operation.
2. Discuss the importance of being able to work with others.
3. Find information about a labor union.
4. Gather newspaper articles about people in industrial work.
5. Take part in a skit where workers are cooperative and helpful.
6. Plan a skit to show how workers could be disagreeable and unpleasant.
7. Tell how pay could be used to increase production.
8. Name five products made on an assembly line.
9. Tell what characteristics you have or don't have for adapting to factory work.
10. Plan an assembly line production.
11. Describe the kind of environment in which the machinist works.

12. What is the life style of manufacturing worker.

Vocabulary:

environment
factory
industrial
wage
mass production
boycott
management
labor union
garment
labor
strike
collective bargaining
interdependence
assembly line

Suggested Activities:

1. Learn about Eli Whitney's idea for mass production. Plan a skit about his explaining his idea.
2. Write rules and policies that you feel would be important for a factory.
3. Teach some sewing skill to another class member - sew on button, iron on patch.
4. Design a cartoon showing what you might be thinking of as you do a routine job.
5. Tell how working conditions could influence a worker's attitudes, color, music, cleanliness.
6. Simulate a working condition with management and labor.
7. Prepare the design of some fabric, as painting or tie dyeing.
8. Operate an assembly line for blue denim pot holders, bean bags or puppets.

Material Resources:

Books:

Xerox Corp. Publishing Educ. Center, Columbus, Ohio; Career Pictures-Manufacturing

American Book Co. (pamphlet), Machines
Tillie S. Pine; Simple Machines and How We Use Them
Rose Wyler,; What Makes It Go
Mini Productions Inc., Manufacturing 1974; When You Grow Up

Films:

Multi-Media Productions, Inc. Stanford Ca. (slides);
Discovery Packet-The Rise of Industrial
Filmstrip; How We Move Things
Filmstrip; Simple Machines For You
Filmstrip and cassette; 1975; Who Put the Blue in the Jeans
Modern Talking Pictures Service; 101 Does Its Bit
Modern Talking Pictures Service; Why the Shoe Fits
Association Sterling; Merchant to the Millions

HOW MUCH MONEY WILL BE EARNED?

Workers are often paid by the work they do. Help figure a day's wages by filling in the blanks on this chart.

WORKER	JOB	PAY	WORK DONE	WAGES
Tom	Button hole maker	$4 for 200 button holes		$8.00
Jack	pocket sticher	$8 for 200 pockets	400 pockets	
Jane	jeans hemmer	$5 for 100 jeans		$15.00
Mary	waistband stitcher	$7 for 100 waist bands	400 waist-bands	
Pete	fly stitcher	$3 for 100 flies	500 flies	
Alice	seamer	$_____ 100 seams	300 seams	$12.00

Adapted from LIFESTYLE DIMENSIONS

Spirit Duplicating Masters for *Adventures in the World of Work*

CAREER INTEREST LIST

Who Puts the Blue in the Jeans?

	Would Like	Would Not Like	Why
Cotton-Picking Machine Operator			
Cotton Gin Operator			
Mill Machine Operator (carding, etc.)			
Dyer			
Weaver			
Laboratory Technician			
Quality Control Supervisor			
Inspector			
Shipping Clerk			
Designer			
Merchandiser			
Sample Stitcher			
Purchasing Agent			
Pattern Maker			
Pattern Grader			
Production Manager			
Hand Spreader			
Pattern Cutter			
Sewing Machine Operator			
Ironer			
Packer / Shipping Clerk			
Buyer			
Salesman			
Truckdriver			
Salesclerk			

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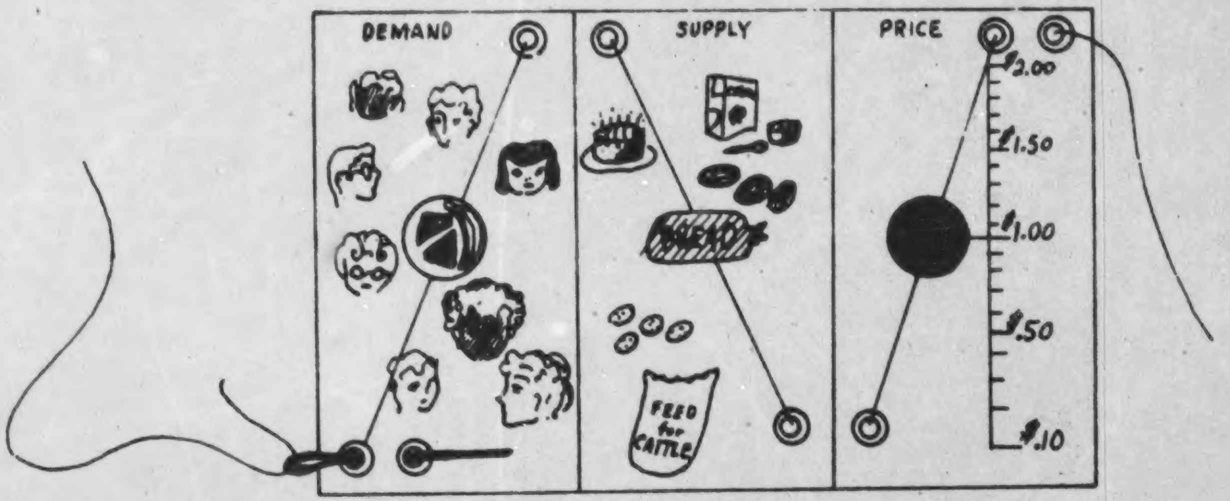
From Aventures in the World of War [illegible] Random House

THE LAW OF SUPPLY AND DEMAND

Use a piece of big strong paper to make this model. Put people in the demand column. Put grain products in the supply column. Put a money scale in the price column. Thread string as shown. Tape the dinner plate, the loaf of bread, and the $ sign to the string. Pull the ends of the string to see the model work.



Use the words UP or DOWN to answer these questions:

When demand goes down supply goes ________________.

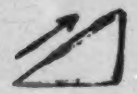
When demand goes down price goes ________________.

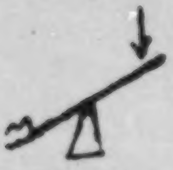
When supply goes down price goes ________________.

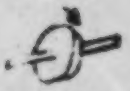
SIMPLE MACHINES ON THE SEWING MACHINE

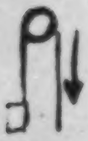
WHAT DO YOU KNOW ABOUT THE SIMPLE MACHINE?

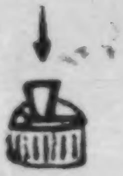
Draw a line from the picture to its name.

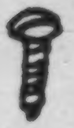






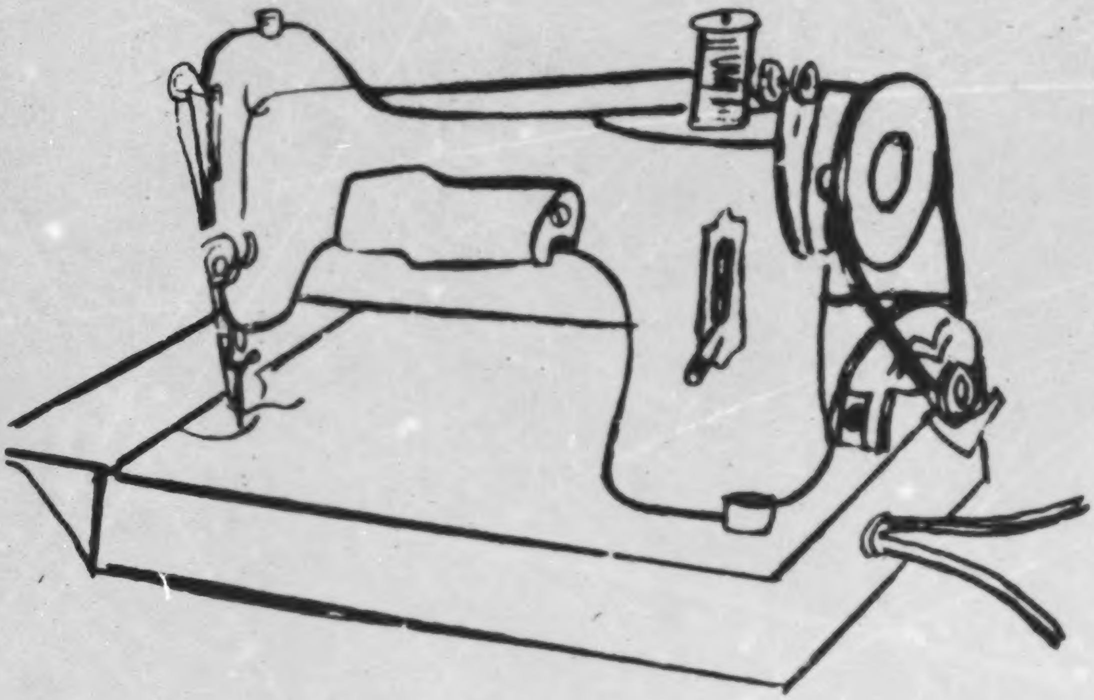






WHEEL AND AXLE	(WA)
INCLINED PLANE	(IN.PL)
PULLEY	(P)
LEVER	(L)
SCREW	(S)
WEDGE	(W)

PUT THE INITIAL OF THE SIMPLE MACHINE WHERE YOU SEE IT ON THE SEWING MACHINE.



Adapted from LIFESTYLE DIMENSION GUIDE, developed by The Center for Educational Studies, School of Education, Eastern Illinois University, Charleston, Illinois.

SIXTH EXPERIENCE LEVEL

Occupational Cluster: Public Service

Introduction:

The theme of the Public Service employment is people-oriented. One must be willing to work with all kinds of people since government--local, state, federal--must serve everyone. Many of the public service tasks require longer or at least different hours than those of more traditional employment because the needs of the population cannot always be met from 8:00 a.m. to 5:00 p.m. on weekdays. Furthermore, dealing with people--their problems, needs, and concerns--requires an emotional strength and calm temperament that not everyone possesses. Many persons devote their lives to public service, yet unquestionably could have gained far more personal and material benefits had they pursued some other type of activity. For unlike in industry, measurements of competence in community service are neither profit-motivated nor production-oriented. Finally, being service-involved demands commitment to the task as well as to the society, and this personal commitment may, in fact, distinguish the dedicated public servant from all other workers.

The following is a list of Public Service workers that could be studied within this cluster.

City Managers

Accountants

Advertising Workers

Engineers - Develop complex electric power, water supply, and waste disposal systems to meet the problems of urban living. Design industrial machinery and equipment needed to manufacture goods on a mass production basis, heating, air conditioning, and ventilation for the comfort of man. Design and develop consumer products such as automobiles and refrigerators.

Bank Officers

Bank Tellers

Bank Clerks

Urban Planners

ERIC Reports, Leasco Information Products Inc.
Educational Resources Information Center, U.S.
Office of Education

Nursery School Teachers

Teachers - Elementary, Secondary, University

Counseling - Employment, Rehabilitation, School, College Career Planning and Placement

Librarians - Librarian Assistant

Museum Personnel

Zoo Personnel

Law Enforcement - F.B.I. Security Officers, Police Officers, State Police, Sheriffs, Bailiffs, Inspectors, Investigators, Radio Dispatchers, County Coroner.

Firefighters

Foresters

Range Managers

Ambulance Attendant

Military Personnel

Civil Defense

Post Office - Management (as in Postal Service in Washington, D.C.), Postmaster, Mailhandlers, carriers, clerical, motor vehicle, special delivery

Utilities - Pumping Station Foreman, Water Treatment Plant Operator, Sanitary Service, Wastewater Treatment Plan Operator

Electric Service - Boiler operators, Turbine Operators, Groundmen

Home Service Advisor - Home Ec. and Ag.

Meterman

County Health Officer

Job Corps

Neighborhood Youth Corps

Safety Engineers

Safety and Sanitary Inspectors

Social Workers - Family Service, Child Welfare, Mental Health Clinics Probation and Parole Social Service Aides, Lawyers

Parks and Recreation

Game Warden

Major Project: Law Enforcement

The focus at the Sixth experience level in Public Service is on the law enforcement team. This includes many public service occupations; uniformed policeman, state patrolman, detectives, radio dispatchers, police photographer, chemist in the police laboratory, the ballistics expert, lawyers, etc.

This unit is developed to include a number of these interrelated occupations.

Subject Matter: Science, Math, Social Studies, Art, Language Arts, Music

Career Development Concepts

Major Concept: Certain identifiable attitudes, values, and behaviors enable one to obtain, hold and advance in a career.

Sub Concept: There are effective interpersonal relation skills for giving or evaluating instruction.

Educational Awareness Goal

Major Concept: Educational skills are related to achievement of career goals.

Sub Concept: Knowledge and skills in subject matter areas are helpful in occupational competence.

Attitudes and Appreciations

Major Concept: Society is dependent upon the productive work of individuals

Sub Concept: Specialized occupations result in an interdependent society.

Career Information

Major Concept: Basic career information will aid in making career related decisions.

Sub Concept: Occupations require the use of specific materials and equipment.

Teacher Goals

1. Familiarize the student with a variety of job opportunities in Law Enforcement.

2. Encourage the student to increase their own powers of observation and description.

3. Encourage students to relate their own aptitudes and interests to the expectations of Law Enforcement work.

Pupil Performance Objectives

1. List four ways a worker in Law Enforcement might use perception skills.

2. List three ways becoming a Law Enforcement Officer would appeal to you and three ways it would not appeal.

3. State three contributions of a Law Enforcement Officer to society.

4. List five jobs you could choose to become a member of the Law Enforcement group.

5. List the educational requirements of at least two workers in the Law Enforcement group.

6. Describe in a paragraph how the skills at school are related to at least two of the workers in Law Enforcement.

Subject Matter Focus: Language Arts
Listening and speaking skills
Vocabulary development
Spelling
Dictionary Skills
Reporting
Poetry

Activities:

1. Make a list of materials and equipment used by detectives
   a. Define some of these words completely.
   b. Which of these tools might be used by other occupations?
   c. Which tools would you need instructions to use?

2. Make up spelling lists of occupation related words.

3. Brain storm on job titles, compile a list. Then classify and categorize words according to "opposites"; "city-country"; "indoor-outdoor"; "safe-dangerous"; "body-brains".

4. Use dictionary to look up prefixes-suffixes that might apply to a large list of related occupations (logist; agher)

5. Keep a list of words on the board that pertain to Law Enforcement. Use these words in SEEK-A-WORD Puzzles. Also use these in crossword puzzles.

6. Make a bulletin board with subject matter in center (ENGLISH) Then branch off with occupation that use that knowledge.

7. Have each pupil select an occupation related to Law Enforcement. Give a report on this. Encourage letter writing to obtain original information.

8. Discuss letter writing as a job related skill; in obtaining job. Write letters of application for "jobs" in the room.

9. Read poetry about work. Specifically: Carl Sandburg poems about workers. Have children write poems about occupations.

10. Make up jump rope rhymes about occupations. Teach these to younger children.

11. Write a description: Look at the front of the room. Study it carefully. Turn your back and write a description including as many details as possible. Compare these with others. Discuss how a good sense observation is important in police work.

12. Arrange ahead of time to have a teacher come in the room for a few minutes to "make an announcement". After he/she has left, write a description of the individual.

13. Write a description and classified ad of a "lost" article.

14. View a T.V. show (Policewoman, Columbo, Baretta, Kojak) and discuss the life style of the individuals involved.
    a. observe the "tools of the trade" and discuss how they are used; if special training is required.

15. Be a newspaper reporter and write of news articles about the accident. Report on the courtroom scene, the verdict, etc.

16. Cut clippings from newspapers concerning various incidents where Law Enforcement Personnel are used. Have students list the workers that would become involved in the scene, the equipment that might be used and whether this would involve local workers, state workers and/or the courts.

Subject Matter Focus: Science
Laboratory Techniques
Scientific Inquiry Method
Classification observation

Activities:

1. Bring in "junk" found at the scene of the accident. Classify in a variety of ways.

2. Locksmithing - study various methods used to secure buildings, valuables, etc. Visit the bank and study the safe. Study the history of locks, padlocks, etc. Invent or design a lock or some sort of burglar alarm.

3. E.S.S. has unit on mystery tracks - discuss actions of suspects thru tracks. Teach about plaster casts of tracks. Make casts.

4. Finger Printing - fingerprint all the students in a room. Make a card. Print all thumbs, put one duplicate in a group and see if the students can "discover" the duplicate. Use powder or flour to see if you can "lift" prints. See how many ways you can classify fingerprints. Write to the F.B.I. and obtain information about the F.B.I. fingerprint files.

5. E.S.S. mystery powders. Use to teach methods law enforcement officials employ to analyze evidence.

6. Type "mystery notes" on a variety of typewriters. See if the children can detect which typewriter was used and who had access to the typewriter - eliminate and establish "suspects".

Subject Matter Focus: Math
Measurement
Decimals
Percentage
Graphs
Geometry

Activities

1. Figure time lapse from time of accident to arrival of policemen. Time the driver left the house, time of accident, etc.

2. Measure the distance of "skid marks". The distance the victim was thrown. Measure the distance the "evidence" from site of accident, etc.

3. Work up problem involving bond, money i.e. $1,000.00 bail obtained from various sources.

4. Problems in per-cent Detectives says he's right 45% of the time. He's worked on 130 cases. How many cases was he right?

5. Make graphs of velocity vs. distance. Use bikes and have children brake, then measure distance to stop.

6. Work with angles - study projectiles; what is the effect of the angle of a bullet shot from different heights; graph angles of the distances of the decreasing angle.

Subject Matter Focus: Social Studies
Law Enforcement as an integral part of society
Group living within society
Law and Order is necessary for a society to progress

Activities:

1. Pre-record the facts about a hit and run accident. (See tape)
   Discuss:
   a. Have children file correct police report forms.
   b. Map out the accident scene. Map the possible route taken by the driver, the victim, the police, the witnesses.
   c. Go outside and chalk out the point of impact, locate the "evidence".
   d. Write a profile on description of all the people involved.
   e. Bring in newspaper clippings of an accident or crime. Map the scene.

2. Re-enact the accident. Role play.

3. Take mug shots of all the class. Make police data sheets on all the students, height, weight, descriptions, etc. File in a master file. Use a variety of methods to cross reference i.e. all blue eyes, all dark hair students, etc. Possible use for bulletin board.

4. Visit a court in session.

5. Visit State Patrol headquarters.

6. Visit County Jail to investigate workers, jobs involved, etc.

7. Role-playing - Simulate the resulting court action. Select jury, victim, lawyers, law enforcement officers, court steno, etc. Video tape the play.

8. Teach interviewing techniques by role playing. Have one student play the victim, policeman, etc. Do an interview for T.V.

9. Have insurance company come out and demonstrate braking distances, etc. and safety measures.

10. Discuss gun control laws. The use of guns in our past and present society and their values.

Subject Matter Focus: Art

Activities

1. From a description, draw the victim, suspect, etc.

2. Be a court artist. Draw the main participants in the case.

3. Draw or make a mural of the accident scene.

Discussion Questions:

Introductory

1. Is it necessary for our society to have Law Enforcement Personnel?

2. Where do Law Enforcement Officials get the authority to do their work?

3. How might you feel if approached by a policeman?

Culminating

1. Discussion on value clarification from activities in the book entitled Value Clarification by Simon, Howe, Kirschenbaum. This discussion should include attitudes which exist concerning the position Law Enforcement Personnel hold in our society today. Explain terms such as "pig", "dirty copper", etc.

Culminating Activities

1. Play entitled: "Who Killed Dr. Robin?"

Human Resources:

People: National Guard, City Administration, Armed Forces, Public Officer, Attorney, Fireman, School Workers, Postal Workers, Social Workers, Librarians, Nutritionists, Public Relations people.

Places: Fire Department, Post Office, Police Department, Reserved Centers for Armed Forces, Public Health Department, City Hall, Court House, Churches, Insurance Investigator.

Materials:

Careers with a Fire Department, Johanna Peterson
A Colby Book About F.B.I., C.B. Colby
Night People, C.B. Colby
Yellow Page Career Library, "Public Safety Worker"
Crime Scientists, Mike McGrady
Pamphlets: Send for: F.B.I. Career Opportunities
F.B.I., Washington, D.C. 20535
International Conference of Police Chief Associations
1241 Pennsylvania Avenue S.E.
Washington, D.C. 20003
Booklet on nature of work

National Council on Crime and Delinquency
44 East 23rd Street
New York 10, New York

Material Resources: Books

Careers with The City, Christopher Benson
Careers with The Postal Service, Johanna Peterson
What Can She Be - A Lawyer, Gloria and Esther Goldreich
The F.B.I., Quentin Reynolds
Careers with A Police Department, Jo Anne Ray
Calling Car 24 Frank, Rona Beame
City Workers, Jeanne A. Rowe
The Story of the Secret Service, Ferdinand Kuhn

Pamphlets:
Careers in Law-Circulation
Department 2011
American Bar Association
1155 East 60th Street
Chicago, Illinois 60627

This Is Law Librarianship
The Secretary
The American Association of Law Libraries
53 West Jackson Boulevard
Chicago, Illinois 60604

A Career In Law Enforcement
American Federation of Police
1100 N.E. 125th Street
North Miami, Florida 33161

Firefighter International Association of Fire Chiefs
1725 K. Street N.W.
Washington, D.C. 20006

Careers and The Study of Political Science
American Political Science Association
1527 New Hampshire Avenue N.W.
Washington, D.C. 20036

Audiovisuals
Modern Talking Picture Services #30483
Attitude in Motion - Community Workers helping to develop
Bike Safety Program, by Honda Corporation

Values Clarification, Simon, Howe, Kirschenbaum, Hart Publishing Company Inc., Copyright 1972

Visuals for Children
Collect accident pictures from real picture file at newspaper; insurance company files; forms used in occupations; equipment used in related occupations, films, filmstrip, insurance company investigation forms.

Pamphlet
Deciding For Myself
A Values - Clarification Series
Law and Order Unit
Winston Press - 25 Groveland Terrace

Curriculum Guides:
Enrichment of Teacher and Counselor Competencies in Career Education K-6, Produced by Project Staff at Eastern Illinois University.

5 Curriculum Guides

- Coping Behaviors, Dimensions Guide
- Decision Making, Dimensions Guide
- Lifestyle, Dimensions Guide
- Self Development, Dimensions Guide
- Interacting, Dimensions Handbook

Teachers Occupac:

Resource materials, activity sheets

Games:

Careers, Clue, Manhunt, Columbo

SIXTH EXPERIENCE LEVEL

Occupational Cluster: Fine Arts and Humanities - Consumer Homemaking

There seems to be an overlap of specific jobs in various clusters. The Architect, from the Fine Arts and Humanities and the Interior designed from Consumer and Homemaking seem to be obviously related in interest and in job performance. The two clusters lend themselves to coordinated study. Both work directly with people to plan living and working spaces for their customers. They frequently form together on large commercial projects. The interior decorator often steps in at a point where the architect (builder) has left off. Both can (and do) work as individuals in business for themselves or for large firms as part of a team. Both fields are open to both men and women although fewer women (4%) are architects. Both professions are primarily indoor jobs although some architects work outdoors.

Job Description

Interior Decorator - Plans the functional arrangement of building or room interiors and coordinates furniture, draperies, floor coverings and other items. Interior Decorators may work on private homes on commercial buildings and offices.

Architect - Plans and designs buildings and other structures. Architects also work with engineers, urban planners, and landscape designers. Licensing required upon completion of training that includes graduation from a professional school and a three year apprenticeship. Architect work mostly indoor.

Major Project: Architecture - Interior Design

This unit is a series of organized learning experiences concerned with the application of art principles to the design, selection, and arrangement of materials and objects in interiors or residential and commercial structures to achieve aesthetic effects or as a media for conveying ideas. The subject matter is concerned with design, estimating, inspection, supervision, and contracts and specifications - primarily in the field of building construction with emphasis on the art form.

Teacher Goals:

1. To expand the child's awareness of the job of the architect and designer and their contribution to society.

2. Help children relate their own attitudes and interest in their surroundings to the job of a professional interior decorator and architect.

3. To help the children understand the historical perspective of design to current trends in structures and interiors.

4. To familiarize the child with the related art forms of color, line and style trends in architecture and interior design.

Pupil Performance Objectives:

1. Tell how the architect and interior designer help satisfy personal choices in the style in which people live.
2. Identify interior design and architecture as two fields available to men as well as women.
3. Tell how some styles and designs in homes, public building and interior decor are absorbed from various cultures.
4. Identify three styles of home furnishing and trace their origins to another culture.
5. Present a report on a preference in styles either in a home design or interior design.
6. Present a plan on a model of an arrangement of the classroom which the child would prefer.
7. Relate how an interest or aptitude may lead to a career in architecture or interior decorating.
8. Identify individuals in the community who have selected either architecture or interior design as a career.
9. Identify the stages and type of training necessary to become either an architect or interior designer.
10. Explain two distinct periods of furniture design and tell why you like or dislike it.
11. Relate three things the child could study in elementary school that would relate to either the field of architecture or interior design.

Subject Matter Focus: Math
Addition/Subtraction of $

Career Development Concepts:
Major Concept: Work affects an individual's way of life, in that a person is a social being, an economic being, a family being, a leisure being, and a moral being.
Sub Concept: Lifestyle - leisure time activities and interests may lead to a career, and one's career may, in turn, affect the amount and use of leisure time.

Suggested Activities:

1. Design a piece of wallpaper using only angles, one with only circles on spheres, one with only right angles.
2. Design and select furniture, drapes, carpet, etc. for your ideal room. Using old catalogs determine the approximate cost of each item and the total cost.

3. Select three pieces of furniture to be replaced in your home. Determine the cost.

4. Select furniture store ads from the newspapers (also paint ads, carpet, etc.) Figure costs of replacement.

5. Select different rooms. Figure the square footage. Select three different types and priced carpet. Figure the cost of carpeting the room.

6. Measure the classroom and figure the cost of carpeting it.

Subject Matter Focus: Social Studies
Transfer of Culture

Career Development Concepts:
Self Development: Individuals differ in their interests, aptitudes, values, and achievements.
Sub concepts: There is a relationship among interests, aptitudes, achievements, value and occupations.

Activities and discussion:

1. Discuss various types of house styles and their possible design origin (Spanish, Adobe, English Tudor, Colonial Saltbox, etc.) Have each child locate a picture of a house or public building and trace its origin if possible. Study pictures of homes in other countries. Tell why those styles were used. Why were they adapted by other cultures. What are the primary functions of homes in other countries? How does environment help to determine home design.

2. Select pictures or study various famous buildings. Why were they designed as they were? What did culture of the people have to do with their style and construction? (Notre Dame Cathedral, Pyramid, Igloo, etc.). (Use REACT Page SD Level #4, Page 173 Self D. Dimension Guide, Eastern Illinois University Guide).

3. Start a notebook of house or building pictures from newspapers, magazines, etc. Classify designs according to their similarities. Reclassify them according to cultural origin.

4. Select drawings or pictures of furniture and classify them chronologically.

5. Design or draw a home suitable for a warm climate, a moderate climate and a cold climate. What must you consider in your design? Why?

6. Design an ideal home for your family. Design a home that you would like to live in as an adult. Or select pictures from magazines and tell why you like that type of home or room.

7. On paper, rearrange the room (the way you would prefer it) Group individuals where you wish. Why did you put certain people in certain places? How do you feel about your arrangement? How do others feel? Discuss feelings of belonging and self concept in these placements.

Subject Matter Focus: Science
Classification and Observation

Career Development Concepts:
Major Concept: Attitudes and appreciation. Society is dependent upon the productive work of individuals.
Sub Concept: Completion of a worthwhile task has value for the worker and for society.

Suggested activities:

1. Start a notebook of houses or buildings - pictures from newspapers, magazines, etc. Classify designs according to their similarities.

2. Study designs of large or important buildings. What knowledge of stress and structure was necessary to build it? (i.e. Sears Tower, the Pyramids, the Washington Monument.)

3. Select a famous building and research it to discover what, if any problems were encountered in its construction or design (Washington Monument, St. Louis Arch, etc.)

4. Make a model home from plans and styro-foam sheets. (An easy way to cut the foam is with a hot knife or wire.)

Subject Matter Focus: Language Arts
Proofreading
Descriptive Paragraphs

Career Development Concepts:
Major Concept: Decision Making - Life involves a series of choices leading to career commitments.
Sub Concept: Previous decisions, peers, gratifications, needs, interests and career information influence present and future decisions.

Suggested Activities:

1. Choose three pictures of rooms you like. Write a descriptive paragraph of one of these rooms. Show the pictures and paragraph to another student. See if they can identify the correct picture. Have them proof read your paragraph.

2. Read magazines for descriptions of interior decors. Read these to the class. Rewrite key words and see if meaning is changed.

3. Make a list of vocabulary words from magazines that pertain to interior design. Brainstorm for terms related to both the field of architecture and interior decorators.

4. Interview local resource people. Write up appropriate questions.

5. Write advertising copy for your wallpaper design (See Math) in an effort to "sell" it to the rest of the class to be used in the room.

Human Resources:

1. Local interior decorators
2. Architecture students from local university
3. Industrial Arts Instructors
4. Draftsman
5. Personnel from paint, wallpaper stores.

Material Resources:

Teacher Materials

1. Career Pictures, Consumer and Homemaking, a weekly Reader Career Awareness Program.
2. Career Pictures, Fine Arts and Humanities
3. Enrichment of Teacher and Counselor competencies in Career Education K-6. The Center of Educational Studies, Charleston, Illinois, Eastern Illinois University.
4. Kit Toward Affective Development
5. Yellow Pages of Learning Resources, Richard Saul Wurman
6. The Changing Old World. Social Studies Text, Silver Burdett
7. Our Language Today. American Book
8. Learning By Investigating. ESIJ Science Series

Materials and Things:

Magazines, catalogues, styro foam. House plan magazines, newspapers.

Library Resources:

Cathedral - Book
Architecture - The World We Build - M. Bardi
American History in Art - Rena Meuman Coen 759 Co
The Art of Colonial America - Shirley Glubok 709.73 CL
Treasures to See - Leonard Weisgard 708 WE
Going for a Walk with a Line - Douglas MacAgy 709.04
The Art of Ancient Mexico - Shirley Glubok 970.4
The Art of China - Shirley Glubok
The Art of the Eskimo - Shirley Glubok 709.98
Dimensions of Personality - Pflaum Standard

Films

Free Loan Educational Film Catalog

Native American Arts

The Inner Eye of Alexander Rulsch

Color and Texture in Aluminum Finishes

Lincoln Trail Libraries

Biography of Frank Lloyd Wright

Art of the Middle Ages

Castles of Scotland

Chartres Cathedral

The Lourve

Williamsburg Restored

The Spirit of Rome

Eskimo Artist Kenojuak

SIXTH EXPERIENCE LEVEL

Occupational Cluster: Personal Services - Occupations - Hospitality and Recreation.

Two occupation clusters were combined to formulate this unit on theater. At this point the concept of employer-employee relationship will be stressed. Children at this level (sixth experience) will readily become aware of the necessary attitudes and behaviors required to obtain and hold a job. The job of theater manager (Hospitality and Recreation) and waiter/waitress (Personal Service) provide the proper interactions of employer-employee. The two are related and easily identified as jobs open to young people. This emphasis will allow also the pupil to become acquainted to the function of other jobs such as projectionist, custodial services, cashier, ticket taker, office help. (The specific jobs studied will be that of the theater manager and the waiter/waitress at the concession stand).

Major Project: Theater Manager - Concessions

Job Description

Waiter/waitress (Clerk) in Concession stand sells food and merchandise to passing customers. They must be pleasant, attractive and courteous. On the job training is frequently used method of occupational preparation.

Theater Manager - Theater managers may work for either large or small chains or may own their own theater. The success or failure of their theater operation depends on how they do their job. Some of the responsibilities may be in selection of films, maintaining the appearance of the theater, advertising, scheduling times for films and length of the film run. He must maintain a business which appeals to the public in his area. Many of his employees may be part time and how they do their job is a reflection on the managers job.

Career Development Concept:

Major Concept: Coping Behaviors - Individuals can learn to perform adequately in a variety of occupations and occupational environments.

Sub Concept: It is important for a person to be able to make a transition from one job to another.

Attitudes - Appreciations:

Major Concept: Society is dependent upon theproductive work of individuals.

Sub Concept: Most occupations include common expectations such as punctuality, dependability and avoidance of excessive absence.

Educational Awareness:

Learning achievement depends upon effort and ability.

Career Information:

Major Concept: Basic career information will aid in making career related decisions.

Sub Concept: Occupations may have certain dress requirement.

Teacher Goals:

1. Provide the child with the opportunity to try the occupational task of selling items from a concession stand.

2. Help the child be acquainted with the tasks of operating a theater.

3. Help the child learn the ways of obtaining a job and the behaviors and attitudes required to keep the job.

4. Help the children understand the complexities of operating a business.

5. Help the child understand the interdependence of workers and co-workers to management.

Pupil Performance Objectives:

1. List the occupations necessary to the successful operation of a theater.

2. Be able to fill out a job application and simulate a job interview.

3. List three personality traits that would be helpful to the theater managers job.

4. Select a movie and design advertising posters for it.

5. Design and print up tickets for a movie showing

Subject Matter Focus: Math

This nine weeks will be devoted to division and multiplication of fractions and percentages. The teacher should be aware of every possible use of these skills in developing this unit. The following activities give suggestions in doing this.

Activities:

1. Figure the amount of profit from the sale of 100 candy bars.

2. Setting up a figure for expense, have the students figure how many people will have to see the movie to make a profit.

3. Show the students how decimals are related to money.

4. Have a group of students teach a group of smaller children how to make change.

5. Have students set up a cash drawer to use in a concession stand. Devise a method of keeping track of daily profits. (A graph could be devised to show the profit to the class.)

6. Figure profits of the theater operation on a percentage basis.

Subject Matter Focus: Language Arts
Main idea of a paragraph
Specific writing skills
Listening and speaking

Activities:

1. Write an article for the newspaper concerning the film the students will make.

2. Writing questions for interview of a theater manager. Create an introduction to the program and a conclusion.

3. Filling in an application for a job. Have a committee write the form.

4. Writing a report of a days work in a particular position which has been assumed in the simulation of a theater.

5. Write an advertisement for use with theater production.

6 Select films for viewing

7. Make posters advertising your movie.

8. Design uniforms for a theater crew.

Subject Matter Focus: Social Studies
To teach that history is written from records of the past and that theatre is a means of cultural transfer and historical perspective.

Activities:

1. Using a Social Study text, study and discuss the role of theatre as an outgrowth of the culture. In discussing ancient Greece, explore the type of theatre used, how the tragedies and comedies presented reflected changes in the society; how the Roman empire assimilated the Greek theatre form.

2. Discuss the historical view of the theatre, origins of theatre. How will future civilizations view our society if able to view current films?

3. Select a current film to be placed in a "time capsule." Why would you choose a particular one? What criteria would you use in selecting the film?

4. Select films related to ancient Greece and ancient Rome. Discuss these films. How would a theater be managed in those times?

5. Discuss the age pupils must be in order to obtain a job. Discuss child labor laws. Why were they necessary? Are they still necessary? Should they be changed?

Subject Matter Focus: Science and Health

Correlation between camera and eye lenses, convex and concave, etc. (Unit #4 of E.S.L.I. Science book develops this unit well)

Activities:

1. Locate old cameras which could be taken apart to see how cameras are made. Label these. (See activity #3)

2. Study the processes involved in development of films.

3. Construct an eye from modeling clay and label the parts. Compare these with labeled parts on activity #1.

4. Study prisms and how light affects the making of films.

5. Experiment with projectors to see whether close position of object makes objects larger or smaller than reverse of this operation.

6. Study lens of a filmstrip projector to see what causes the projector to focus in.

7. Study and discuss aspects of good grooming, punctuality, dependability as it affects your job.

Human Resources:

Local theater manager, school A-V specialist, local little theatre director, University department of theatre and cinema.

Field Trip:

Visit a local theater to view operation, explore projection room, interview individual who works in theater concession stand.

Material Resources:

Books

1. Model Eye - Eye Transparency
2. Movies in America - William Kuhns
3. Exploring The Film - Kuhns and Stanley
4. The Media Works - Valdes and Crow (for teacher use)
5. Teaching In The Dark - Kuhns and Carr (for teacher use)
6. Lincoln Trails Movie List
7. The Emergency Book - Bendick
8. Windows On The World - White and Lietz
9. The Human Senses - Bendick
10. The Human Eye - Schuman
11. All About The Human Gody - Glemser
12. Changing Old World - Silver Burdett, Copyright 1967

Films Available

1. Athens, The Golden Age - Lincoln Trails
2. Film First, Part I - Lincoln Trails
3. Film First, Part II - Lincoln Trails
4. Lincoln Trails Film Catalogue

SIXTH EXPERIENCE LEVEL

Occupational Cluster: Marine Science - Environmental Control

Major Project: Oceanographer

Career Development Concepts:
Major Concept: Lifestyle
Sub Concept: Leisure time activities and interests may lead to a career and one's career may in turn affect the amount and use of leisure time

Educational Awareness: Career oriented learning may take place in school or out of school.

Attitudes and Appreciations: Completion of a worthwhile task has value for the worker and for society.

Career Information: Occupations have their own work settings.

Teacher Goals:

1. Familiarize the children with the oceanographers of recent times and their accomplishments.
2. Guide children in developing vocabulary of materials and equipment used by an oceanographer.
3. Familiarize the students with the educational needs of an oceanographer.
4. Explore the uses of oceanography as a leisure time activity.
5. Explore the four areas of oceanography; physical, chemical, biological and geological. Discuss how these correlate with the educational requirements of an oceanographer.
6. Discuss with students characteristics of the ocean, as uses, slopes, shelves, resources from.
7. Link for the students the connection between the oceanographer and environmental control.

Pupil Performance Objectives:

1. To be able to list two individuals involved in oceanography and describe their interest.
2. Children name the four fields of oceanography and name five vocabulary words and definitions of each field.
3. Describe the use of two tools or machines used in oceanography work.

4. List three ways in which oceanographers help in environmental control.

5. List five jobs an oceanographer might become involved with in his work.

Subject Matter Focus: Math

The teacher's main goal for this segment of the class would be to work in decimals, finish fractions, work in geometry. These areas should be worked into this unit as possible. The following are possible types of experiences.

Activities:

1. Look up the depths of each of the three major oceans and compare how much deeper one is than the other. State actual data from the encyclopedia.

2. A chart stating the nautical measures and equivalents: span, fathom, length, nautical mile, international mile, league, degree.

3. Have students develop a designated number of problems concerning the above terms. Have other students work the problems.

4. Many story problems using all basic functions might be developed to compare ocean sizes, fish sizes, equipment, etc.

Subject Matter Focus: Language Arts

Developing the students ability to read library resources in relation to finding specific facts.

Activities:

1. Library trip to hunt for information concerning an oceanographer. Their responsibilities, education, the equipment, etc. Share gathered ideas through discussion. The trip might be made by a special committee and presented to the class or by the group.

2. Have a committee search for stories concerning under water adventure from reading sources available or from library.

3. Read and become acquainted with ocean lore as available from reading sources and library materials, Study the Gods and characters of the water as Moby Dick. The Jules Verne books are very appreciated at this level.

4. Brainstorm with students on past and present oceanographers. Choose one of interest to report on in written or oral fashion.

5. Research to find hazards and concerns of oceanographers. A debate could be staged to discuss the pro's and con's of oceanography.

6. Have the students develop crossword puzzles or word game puzzles, or scattergrams with the vocabulary from this unit.

7. Cut pictures from magazines, catalogs to show equipment used by oceanographers.

Subject Matter Focus: Social Studies
Locations which lend to oceanographers work. Study culture of these countries pointing out how your work might give you a choice of place to live.

Activities:
1. Locate the countries and areas where oceanographers work might take place.

2. Have students choose one of the above areas and have them study the culture of the country.

3. Locate on the map the three great oceans of the world. Discuss seas, bays, gulfs and label an example of each. Label equator and tropic regions and discuss temperature variations and their effect on this career.

Subject Matter Focus: Science
Study of under water life by discovering the effect the ocean floor and water components gravity and weather have on the life.

Activities:
1. Study such factors as:
    A. Stabilization of sealife by control of water pollution.
    B. Talk in general, and study life cycle of water life. Explore the term "survival of the fittest"

2. Simulate by diorama the environment under water of a given area or of a given fish. Explore the food and environment necessary for various types of fish. Using this diorama as a visual and give an oral report explaining the diorama.

3. Divide class into committees having them develop a pictoral and audio show of the three groups of fish life in the ocean. Groups may choose to use filmstrip or slides they have made with tape for audio.

4. Design charts showing types of ocean shelves and slopes and how they affect work of the oceanographer.

5. Independent students might read a map of ocean floor and explain its key and information to all. (This map can be found in the encyclopedia)

6. Explore the chemical composition of salt water and fresh water through microscope. Become acquainted with the "life" in each type of. (See REACT Page included)

7. Set up salt water and fresh water aquariums. Observe and record actions of life of each.

8. Collect pictures of "life" and make color lifts for identification or exploring the ocean floor together.

Discussion Questions:

Introductory:

1. List with the students ways in which an oceanographer is helpful useful and possibly an avenue for enjoyment.

2. Brainstorm on responsibilities of an oceanographer. Discuss how they are beneficial to society.

Culminating Discussion:

1. Discuss whether they would prefer becoming an oceanographer as a career or as a hobby.

Subject Matter Focus: Art

1. Mural depicting "life" underwater. Oceanographers at work might be included.

2. Develop a mobile with objects which remind us of oceanographers.

3. Design a background to place to the back of aquariums.

Games and Reinforcement:

These could be used as culminating activities and lend to being student made.

1. Identification games for placing fish in correct class.

2. Tic Tac Toe with questions concerning oceanographers.

Human Resources:

1. An aquarium supply shop owner.

2. Someone who has cared for fish as a hobby.

3. A zoo attendant who has cared for water animals.

4. Contact local University for faculty members in this area.

5. Contact Army Corp of Engineers in the area for resource people.

6. Have students mail to an oceanographer questions and a tape.

7. Study parent lists for someone who has done diving for a hobby.

Field Trip:

1. To an aquarium supply shop - check for salt water and fresh water animals. Have a discussion about care of aquariums.

2. To a well developed fish set up which is a hobby.

3. Zoo with water animals.

Filmstrips:

2 strips titled Oceanography #551, Mansfield Grade School Library

Films:

1. Lincoln Trails
   - a. Beneath the Sea
   - b. The Sea

2. Modern Talking Picture Service
   - a. Ekofisk - A City A Sea #30739
   - b. Sea Venture #4876

Childrens Resources:

1. Books to read concerning this unit.
   - a. Moby Dick
   - b. Jules Verne books
   - c. 20,000 Leagues Under The Sea

2. T.V. Programs as Jacques Cousteau. Assign a specific goal for watching.

3. Books from Library (Dewey #551)
   - a. Men Under The Sea - Dean, Anabel
   - b. Project Sea Lab - Shannon, Terry
   - c. You and the Oceans - Sherman, Diane
   - d. Harvesting the Sea - Fealon, D.X.
   - e. What Does An Oceanographer Do - Waters, John
   - f. Ocean - Barlow, Sy
   - g. Ocean - Carson, Rachael
   - h. Ocean - Clarke, Arthur
   - i. Oceanography - Saharff, Robert
   - j. Oceanographer - Carson, Rachael
   - k. The Sea And Its Mysteries - Hutchinson, William

Note:

The sheets which are included at the conclusion of this unit are for teacher information (T.I.) or as examples of worksheets which might be incorporated into the work.

OCEANOGRAPHER

An estimated 5,200 oceanographers and closely related technical personnel were employed in the United States in 1968. About four-fifths were employed by the Federal Government and colleges and universities. Those Federal agencies employing substantial numbers of oceanographers were the Naval Oceanographic Office, the Bureau of Commercial Fisheries, and the Environmental Science Services Administration.

A growing number of oceanographers worked in private industry for firms that design and develop instruments and vehicles for oceanographic research. A few worked for fishery laboratories of state and local governments.

The minimum educational requirement for beginning professional positions in oceanography is the bachelor's degree with a major in oceanography, biology, a geo-science, one of the other basic sciences, mathematics, or engineering. For professional positions in research and teaching and for advancement to high-level positions in most types of work, graduate training in oceanography or one of the basic sciences usually is required.

Undergraduate training in oceanography, marine science, ocean engineering, or fisheries was offered by only about fifteen colleges and universities in 1968; and only seven institutions offered the bachelor's degree with a major in oceanography. However, since oceanography is an interdisciplinary field, training in the related basic sciences, when coupled with a strong interest in oceanography, is adequate preparation for most beginning positions in the field or for entry into graduate school.

Important undergraduate courses for the prospective oceanographer are in the fields of mathematics, physics, chemistry, geophysics, geology, meteorology, and biology. In general, the student should specialize in the particular science field which is closest to his area of interest in oceanography. For example, students interested in chemical oceanography should obtain a degree in chemistry.

In 1968, about thirty-five colleges and universities offered advanced degrees in oceanography and about thirty other institutions offered advanced courses in fisheries, marine science, or oceanographic engineering. The academic work of the graduate student in oceanography consists primarily of extensive training in a basic science combined with further training in oceanography. The graduate student usually works part of the time aboard ship--doing oceanographic research for his dissertation and at the same time acquiring familiarity with the sea and the techniques used to obtain oceanographic information. A variety of summer courses is offered by universities at the various marine stations along our coasts. These are for both undergraduate and graduate students and are recommended particularly for students from inland universities.

The beginning oceanographer with the bachelor's degree usually starts as a research or laboratory assistant or in a position involving routine data collection, analysis, or computation. Most new oceanographers receive on-the-job training related to the specific work at hand. The nature and extent of the training vary with the background and needs of theindividual. Thus, the new graduate who has a degree in a basic science rather than in oceanography usually can be provided enough understanding of oceanographic principles to enable him to perform adequately in this field.

Beginning oceanographers having advanced degrees usually can quality for research and teaching positions. Experienced oceanographers may be selected for administrative positions, in which they may supervise a research laboratory or direct specific survey or research projects.

Adapted from: Occupational Outlook Handbook, 1970-71 edition.
U.S. Department of Labor, Washington, D.C.
p.p. 141-144.

FIELDS IN OCEANOGRAPHY

PHYSICAL OCEANOGRAPHY

surface currents

ocean temperatures

tides

wave movements

mixing of oceans

colors of seawater

CHEMICAL OCEANOGRAPHY

salinity of seawater

density of seawater

geochemical balance

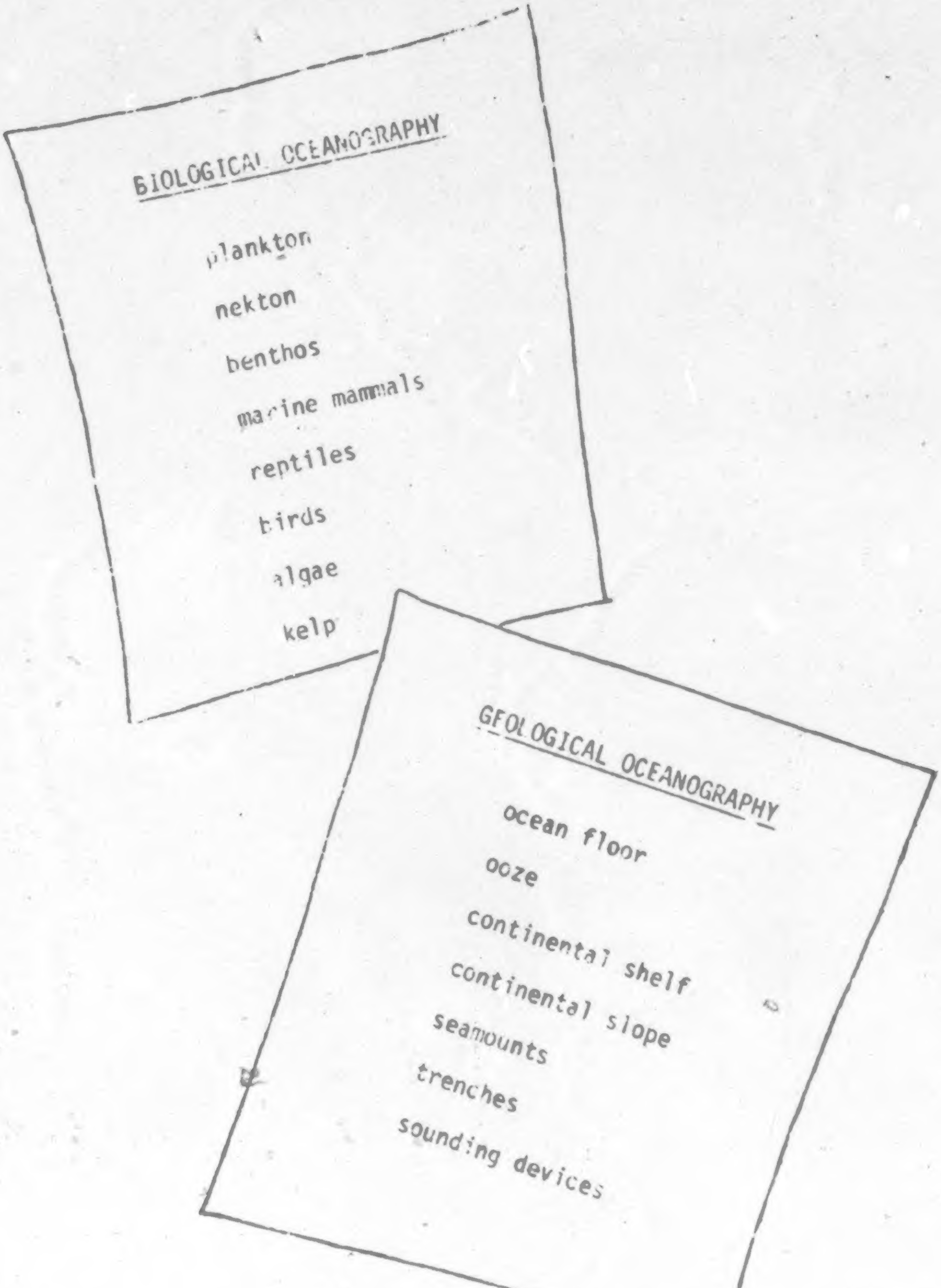
chemical reactions in the ocean

chemical elements in seawater

These lists represent ideas that you may encounter when learning about four of the large fields of oceanographic work.

Check the encyclopedia and other science books until you know enough about each field to choose the one for which you think you are presently most suited. Write a short description of how one of these fields fits your strengths and weaknesses, health, and interests, as well as your present knowledge. How do your hobbies or other activities fit in with thoughts about oceanography?

From Eastern Illinois University Life Style Dimension Guide.



BIOLOGICAL OCEANOGRAPHY

plankton
nekton
benthos
marine mammals
reptiles
birds
algae
kelp

GEOLOGICAL OCEANOGRAPHY

ocean floor
ooze
continental shelf
continental slope
seamounts
trenches
sounding devices

From Eastern Illinois University Life Style Dimensions Guide

OCEANS AND RIVERS

Look at the chart below and compare the differing amounts of solid materials in ocean water and in river water.

Solid Materials	Percentage of All Solids in Ocean Water	River Water
Chloride	55.0	5.7
Sodium	30.6	5.8
Sulfate	7.7	12.1
Magnesium	3.7	3.4
Calcium	1.2	20.4
Potassium	1.1	2.1
Bicarbonate	0.4	35.1
Silica	small	11.7
Iron-aluminum oxides	small	2.8
Nitrate	small	0.9
Others	0.3	small

__________ Which solid is most abundant in ocean water?

__________ Which solid is most abundant in river water?

__________ In both ocean and river water, which solid is most nearly equal?

__________ How much greater is the percentage of calcium in river water than in ocean water?

__________ How much less is the percentage of magnesium than sodium?

__________ In river water, how much greater is the percentage of sodium than nitrate?

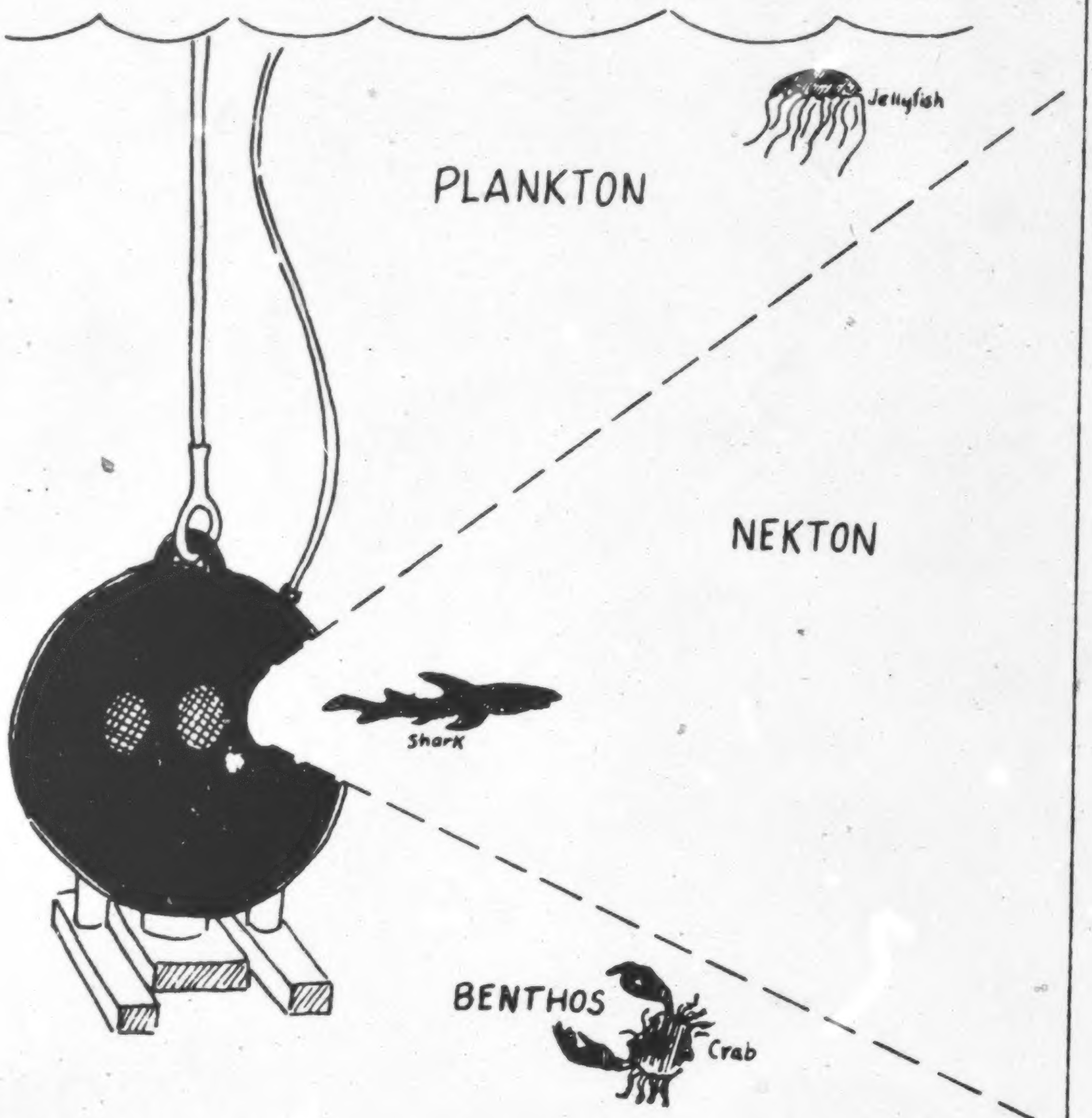
You can probably make up many other similar questions for your friends to figure out. Try it!

From Eastern Illinois University Life Style Dimension Guide

S/D Level 6/3

ANIMALS OF THE OCEAN

Animal life in the ocean is divided into three large groups: PLANKTON, NEKTON, and BENTHOS. The plankton are mostly tiny creatures that float near the surface, the nekton are free swimmers, and the benthos are bottom dwellers. Look these words up and then fill in names or drawings of several creatures in each group. See how many unusual ocean dwellers you can find.



From: Eastern Illinois University Life Style Orientation Guide.

APPENDIX B

SUGGESTED MUSICAL ACTIVITIES TO CORRESPOND WITH OCCUPATIONAL CLUSTERS

Kindergarten - Business and Office

1. Visit the Office secretary
    a. As he or she works, does the secretary listen to music?
    b. Can you think of reasons why the secretary may or may not listen to music?
    c. Give one example of a time when it might be all right to listen to music while working.
    d. Give one example of a time when it might not be all right to listen to music while working.
    e. Is there a special rhyme used while the typewriter is going?
        1) can you use the rhythm sticks and make the same sound that the typewriter makes?

2. Listen to the recording "Typewriter" by Leroy Anderson.
    a. Does it sound like a typewriter?
    b. Do you think that a real typewriter was used in making this recording?
    c. Can you make a sound like this on some instruments?
        1) what instrument would you use?
        2) would you need more than one instrument?

First Grade - Manufacturing

1. Listen to the sounds in the kitchen in your home.
    a. Make a list of these sounds.
    b. Can you make the same sounds on an instrument?

2. Listen to the sounds heard in the school cafeteria.
    a. Make a list of these sounds.
    b. What sounds are the same in both kitchens?
    c. If there are some different sounds in the school cafeteria, can you find an instrument that will make a similar sound?

3. Is music ever used in restaurants?
    a. If so, can you describe the types of music you have heard in a restaurant? Is it fast, loud, slow, soft?
    b. Why is this type used and others not?

4. What type of music is used in a grocery store?
    a. Why is this type of music used in place of the opposite type?

5. Make a machine by using students (an assembly line type).

6. Songs to sing from Music Through the Day, Silver Burdett

Boil the Cabbage Down	p. 32	The Cupboard	p. 31
Mix a Pancake	p. 32	Street Cries	p. 96
Polly Put the Kettle On	p. 33	Upstairs & Down	p. 33
I Want to be a Farmer	p. 58	Do You Know?	p. 97

2nd Grade Environmental - Meteorologist

1. Make a wind chime.
   a. wood
   b. metal
   c. glass or plastic
      (1) How does the thickness determine the pitch?
      (2) How does the length determine the pitch?
      (3) How does the different type of material change the sound?
      (4) In order to make the most musical sound, should the wind be strong, medium or slight?

2. Listen for sounds of the environment
   a. Forest
   b. Farm
   c. City
   d. Ocean
   e. Day
   f. Night
   g. Storm
      (1) If possible, make a tape recording of these sounds.
         (a) Play a game using short playings of each sound and tell where each came from.
      (2) Is it possible to make some of these same sounds on some type of instrument?
3. Pretend you are the following things:
   a. Balloon
   b. Snowman
   c. Tree
   d. Kite
      (1) What things might happen to you?
      (2) Write a story about one of these things. Include in your story suggested movements and suggested music.

4. How does the enviroment effect instruments? Humidity
   a. Drum heads
   b. Strings

5. Songs from (The Magic of Music) Ginn
   a. Music Brings Us Wonderment p. 46-62
   b. Write words for a song and decide what melody should be used. (one that is already familiar to the class)

6. Listening
   a. Cloudburst "Grand Canyon Suite"
   b. Berceuse Adventures in Music Grade 1
   c. Berceuse Adventures in Music Grade 2
   d. Fountain Dance Adventures in Music Grade 2
   e. Walking Song Adventures in Music Grade 1
   f. The Snow Is Dancing Adventures in Music Grade 3 Vol 1
   g. Spring Song Adventures in Music Vol 3 Primary

7. Movies
   a. Grand Canyon
   b. Snow

8. Poems from Ginn (The Magic of Music)
   a. If I - Ciardi p. 48
   b. A Candle - Brown p. 52
   c. Stars - Bacmeister p. 54
   d. Long Ago - Wynne p. 59

Third Grade - Marine Science - Diver

1. Listen to an underwater program on T.V.
   a. If possible, tape some of the music that is used during the program.
   b. How would you describe this music?
   c. How does this music make you feel?
   d. If you were going to play this type of music, what instruments might you use?
   e. Are there instruments that would not represent this type of music? If so, list a few.
2. Are divers more common in certain parts of the world than other parts?
   a. If so, do you know some of the instruments used in other parts of the world that might be associated with sounds of the sea?
3. Use some type of music typical of the sea and put movement to it.
4. Pretend you are a diver, you are under water, what sounds might you hear?
5. Poems from The Magic of Music (Ginn) and Music Now and Long Ago (Silver Burdett):
6. Songs from The Magic of Music (Ginn):

Secret Gardens	Ginn	p.52
Blow, Boys, Blow	S. Burdett	p. 84
Canoe Song	S. Burdett	p. 85

Fourth Grade - Construction - Carpenter

1. Make a list of sounds you might hear at a construction site.
2. Make a tape recording of the sounds heard at a construction site.
   a. Listen to see if there is a rhythm to the hammer and/or the saw.
   b. Repeat this rhythm on an instrument that will sound similar to the saw and/or the hammer.
3. Can carpenter tools be used as musical instruments?
   a. Have someone come in that plays the saw.
   b. Let the students use a saw to see if they can make some kind of a melody.
      1) Let them tape the melody they have created.

Fifth Grade - Health

1. Listen to music of all types.
   a. Pick music that might be used as background music in a dentist's office.
   b. Is there certain music that would sooth the nerves?
      1) If so, tell what qualities this type of music has.
      2) What type of music might make you more nervous?
2. Are there occupations which harm the hearing?
   a. If so, list some of these occupations.
   b. Has something been done in some of these occupations to solve this problem?
   c. What might be done in some of these occupations to solve this problem?

3. Are there occupations dealing with music that might harm the eyes?
   a. If so, what and what might be done to solve this problem?
4. Would music that might be used in an American dentist's office to calm your nerves be the same as used in Greece?
5. Would you respond the same way to a familiar lullaby as you would to a lullaby from Japan?

Sixth Grade - Public Services - Law Enforcement

1. Pick at least two and up to six T.V. programs and tape the theme songs.
   a. Name some of the characteristics that are typical of these songs.
   b. Can you use an instrument and play something that will sound somewhat like a detective's theme song?
   c. Using the pattern of "Name That Tune" name the detective show that uses the theme song that you play.
2. Use a "detective type song" and write your own words.
3. Have the sounds of sirens changed in the last few years? If so, can you demonstrate the sounds as they were and how they are now?

Personal Services

1. Music would probably be used in some way with the following personal service occupations.
   a. List how it would be used.
   b. Give an example of either a piece that might be used or a type of music that might be used.
   c. Tell why music is important in these occupations:

doctor	beauticians
physical director	animal trainer
mortician	

Consumer and Homemaking

1. Pick one occupation in this area.
   a. List the types of music used by this occupation.
   b. List how this type of music might be different than other types.
   c. Learn as much as possible about this occupation through attending a concert, art show, learning about the instruments, or attending a play.
   d. Put on a play using music in and as background.
   e. Put on an art show and pick appropriate music as background
   f. Compose a few short pieces and perform these for the class.

Marketing

1. Music in a grocery store.
   a. Suggest a particular piece of music that would be appropriate to be used as background music and why it would be used?
   b. Suggest a piece of music that would not be appropriate to use as background music in a grocery store and why it should not be used.

2. Write an advertisement implementing music.
    a. Make sure the music compliments your advertisement rather than detracts from it.
    b. The advertisement should be at least 30 seconds long.

Transportation

1. Discuss the sounds of various modes of transportation.
    a. Make a tape of the sounds of as many kinds of transportation as you can.
    b. Make games with these tapes. What transportation goes with what sound.
    c. Have any of these sounds changed over the years?
        1) How many of these sounds can you make vocally?
        2) If some of the sounds have changed, can you make the old sounds?
2. Suggested songs:
    John Henry
    Connecticut Peddler
    Banana Boat Loaders
    Little Red Caboose
    Riding in the Bus
    Let's Go Riding Together
    Drill, Ye Tarriers, Drill
    Erie Canal
    Casey Jones
    My Rocket Ship
    We're Going to the City

Communication and Media

1. List some of the ways music is used on a T.V. show.
2. List some ways that music is used in a T.V. commercial.
    a. Write a commercial for a T.V. show using music.
3. Is background music used on a T.V. show more, less, or just as important as background music used on a radio program?
4. Is music used for a commercial always something especially written for that product?
    a. If not, can you think of a commercial using a tune that you already know.

Agri-Business

1. Make a tape of the sounds heard in any of the businesses of agriculture.
    a. Play a game with this tape, identifying the occupation involved or the piece of equipment being used.

Hospitality and Recreation

1. List all the recreational activities in which music is used.
    a. Give the reasons the music is used and how it is used.
2. What are the reasons for playing music before a movie starts?
    a. Should the type of music played before the movie be related to the movie as far as mood is concerned?

APPENDIX C

BIBLIOGRAPHY

BOOKS:

NAME OF SERIES: Career Awareness Program Popeye the Sailor Booklets

SPECIFIC TITLES: Covers 15 career fields.

GRADE RECOMMENDATION: 4 - 6

TYPE OF ITEM: Comic type booklet for individual student

PUBLISHER: King Features

OVERVIEW: Cartoon characters visit all kinds of jobs in 15 career fields. Points out the rewards as well as the disadvantages and strikes a balance between white and blue collar jobs.

NAME OF SERIES: Careers: A Supplemental Reading Program

SPECIFIC TITLES: (32 story folders each covering a career)

GRADE RECOMMENDATION: 3 - 6

TYPE OF ITEM: Story folders, activity cards; student management folders; survey filmstrip; posters, and manual.

PUBLISHER: Harcourt, Brace, Jovanovich, Inc.

OVERVIEW: Current information connecting abilities and interests to career possibilities.

NAME OF SERIES: Careers for All

SPECIFIC TITLES:
Alike and Different - Grade 4
Interests and Choices - Grade 5
Plans for the Future - Grade 6
Careers for All - Combined Teacher's Guide

GRADE RECOMMENDATION: 4-6

TYPE OF ITEM: Teacher Guide or Student Reference Source.

PUBLISHED: Benefic Press

OVERVIEW: Two data sections per chapter, each followed by "What Do You Think"; Chapter End; Looking At Facts; As You See It; Understanding Yourself; Discussion Topics.

SPECIFIC TITLE: Children's Dictionary of Occupations

GRADE RECOMMENDATION: 3 - 6

TYPE OF ITEM: Student Dictionary

PUBLISHER: Career Futures, Inc.

OVERVIEW: Over 300 jobs listed alphabetically with illustration, definition, and pronunciation.

NAME OF SERIES: Dimensions of Personality

SPECIFIC TITLES:
Here I Am
I Am Not Alone
Becoming Myself

GRADE RECOMMENDATION: 4 - 6

TYPE OF ITEM: Book - Teacher's Edition

PUBLISHER: Pflaum/Standard

OVERVIEW: Deals mostly with self-awareness activities.

NAME OF SERIES: Early Career Series

SPECIFIC TITLES: 24 volumes each covering a career field

GRADE RECOMMENDATIONS: 1 - 4

TYPE OF ITEM: Books for student use.

PUBLISHER: Lerner Publications Company

OVERVIEW: Each volume covers 15 jobs within a career field and brings out the skills and educational experience needed for each job. Easy to read text with full page color photographs of actual work situations.

NAME OF SERIES: Enrichment of Teacher and Counselor Competencies in Career Education.

SPECIFIC TITLES:
Coping Behaviors Dimension Guide
Decision Making Dimension Guide
Lifestyle Dimension Guide
Self-Development Dimension Guide
Interacting Dimensions Handbook
Attitudes and Appreciation
Career Information and Educational Awareness

NAME OF SERIES: Popeye Career Awareness Set

SPECIFIC TITLES: (Titles of occupations in 15 clusters.)

GRADE RECOMMENDATION: 5 - 6

TYPE OF ITEM: Paperback Booklets

PUBLISHER: King Features

OVERVIEW: Comic booklets relating to the fifteen occupational clusters.

NAME OF SERIES: Reading and Career Guidance

SPECIFIC TITLES:
Air Cargo
Here Comes the Fireboat
One Hundred Dresses at a Time
Ship Cargo
Train Cargo
Truck Cargo

GRADE RECOMMENDATION: 3 - 6

TYPE OF ITEM: Student book.

PUBLISHER: Children's Press

OVERVIEW: Covers history, growth, and kinds of jobs involved in each type of career.

NAME OF SERIES: Very Important People Series II Work World of Health

SPECIFIC TITLES:
VIP on Scene in Medical Work
VIP on Back Up Team in Medical Work
VIP Behind the Scene in Medical Work

GRADE RECOMMENDATION: 3 - 6

TYPE OF ITEM: Student Book

PUBLISHER: Children's Press

OVERVIEW: Easy to read text covers many jobs involved in the Work World of Health. Jobs are divided into groups dealing with people, data, or hands and tools.

GRADE RECOMMENDATION: K - 6

TYPE OF ITEM: Curriculum Guide

PUBLISHER: Center for Educational Studies, Eastern Illinois University

OVERVIEW: A wealth of excellent materials for the classroom teacher to use in helping the child develop as a person. The concepts are covered as titles suggest. Materials are organized so that they are very usable.

SPECIFIC TITLE: Everyone Has Important Jobs to Do

GRADE RECOMMENDATION: 3 - 6

TYPE OF ITEM: Book for student use.

PUBLISHER: Children's Press

OVERVIEW: Stresses the importance of each person's job.

NAME OF SERIES: A Highway to Work and Play

GRADE RECOMMENDATIONS: 1 - 6

TYPE OF ITEM: Teacher's guide and student workbook for each grade level

PUBLISHER: McKnight

OVERVIEW: This material stresses awareness and interacting with others

NAME OF SERIES: My Career Workbook

SPECIFIC TITLE: Level 1

GRADE RECOMMENDATION: 1 - 3

TYPE OF ITEM: Workbook

PUBLISHER: Career Futures Inc.

OVERVIEW:
Typical workbook tasks correlated to careers
Career alphabet
Matching object tasks
Career maze
Connect dots
etc.

NAME OF SERIES: Very Important People Set III Communication

SPECIFIC TITLES:
- VIP Who Carry Messages
- VIP Who Print and Publish
- VIP Who Work With Sight and Sound

GRADE RECOMMENDATION: 3 - 6

TYPE OF ITEM: Student Book

PUBLISHER: Children's Press

OVERVIEW: Easy to read text covers many jobs involved in the Work World of Communication. Jobs are divided into three groups: programming; engineering; and business office. Skills needed for each job are covered.

NAME OF SERIES:

SPECIFIC TITLE: Whose Tools Are These?

GRADE RECOMMENDATION: K - 3

TYPE OF ITEM: Book

PUBLISHER: Children's Press

OVERVIEW: Illustrates tools used by many workers.

NAME OF SERIES: Yellow Pages Career Library

SPECIFIC TITLES:
- Architect
- Auto Worker
- Carpenter
- Cook
- Engineer
- Journalist
- Nurse
- Principal
- Public Safety Worker
- Real Estate Agent
- Social Worker
- Transport Driver

GRADE RECOMMENDATION: 3 - 6

TYPE OF ITEM: Booklet

PUBLISHER: National Association of School Principals

OVERVIEW: Each booklet provides a framework of information on which the student can gauge his interests, his capabilities, his motivations, his skills, and his talents. Photographs show people at work, tools, and processes. Shows "Day in the Life of a ________________".

SPECIFIC TITLE: Yellow Pages of Learning Resources

GRADE RECOMMENDATION: 4 - 6

PUBLISHER: Group for Environmental Education

TYPE OF ITEM: Book

OVERVIEW: Provides firsthand learning resources that can be found in a city and suggests ways to make these resources accessible.

AUDIOVISUALS

NAME OF SERIES: Adventures in the World of Work

SPECIFIC TITLES:
Who Puts the Light in the Bulb
Who Puts the Print on the Page
Who Puts the Ice in the Cream
Who Puts the Blue in the Jeans
Who Puts the Room in the House
Who Puts the Grooves in the Record

GRADE RECOMMENDATION: 4 -6

TYPE OF ITEM: Filmstrips, cassettes, guide, masters

PUBLISHER: Random House

OVERVIEW: Traces background of occupations and encompasses interrelationship of workers. Details the process of getting the product to the consumer.

NAME OF SERIES: America's Urban Crisis

SPECIFIC TITLES:
Housing
The Transportation
Air Pollution
Water Pollution
Roots of Urban Problem
Solid Waste

GRADE RECOMMENDATION: 5 - 8

TYPE OF ITEM: Filmstrips, records

PUBLISHER: SVE

OVERVIEW: Identifies major environmental problems of city. Must we change our way of life for cities to survive?

NAME OF SERIES: Career Awareness Set I

SPECIFIC TITLES:
School Workers
Susan Goes to the Hospital
Building a Building
A Visit to the Airport

GRADE RECOMMENDATION: 1 - 4

TYPE OF ITEM: Filmstrips, cassettes, guides

PUBLISHER: Education Activities

OVERVIEW: Explores world of familiar and unfamiliar work covering a variety of occupations; professional, semi-professional, and manual work.

NAME OF SERIES: Career Awareness Set II

SPECIFIC TITLES:
Newspaper Goes to Press
Gary Gets a Bank Book
At Home in a Hotel
The Department Store Story

GRADE RECOMMENDATION: 3 - 6

TYPE OF ITEM: Filmstrips, cassettes, guides

PUBLISHER: Education Activities

OVERVIEW: Same set up as above set.

NAME OF SERIES: Career Awareness: Primary Introduction to Career Education.

SPECIFIC TITLES:
I Have a Body
I Have a Brain
The Work People Do
I Can Do Things
I Can Make Choices

GRADE RECOMMENDATION: k - 3

TYPE OF ITEM: Filmstrips, cassettes, guides, activity book

PUBLISHER: SVE

OVERVIEW: Emphasizes understanding of self, skill awareness, and decision-making.

NAME OF SERIES: Career Kaleidoscope

SPECIFIC TITLES:
- All Around the Shopping Mall
- Check In, Check Up
- In TV You Could Be
- One for All at City Hall
- Up, Up and Away

GRADE RECOMMENDATION: 1 - 6

TYPE OF ITEM: Filmstrips, cassettes

PUBLISHER: January Productions

OVERVIEW: Tapes are in rhyme explaining the pictures of the various subjects. Most teachers did not find the rhymes objectionable, some did.

NAME OF SERIES: Career Mothers

SPECIFIC TITLES:
- Advertising Agency
- Retail Clerk
- Nurse
- Teacher
- Commercial Artist
- Factory Worker

GRADE RECOMMENDATION: K - 6

TYPE OF ITEM: Filmstrips, cassettes, guide

PUBLISHER: Audiovisual Instructional Devices

OVERVIEW: Shows workers involved in their duties. Illustrates training needed.

NAME OF SERIES: Cities at Work

SPECIFIC TITLES:
- Dots on the Earth
- What is a City
- Why a City is Where It Is
- The City: Marketplace of Goods and Services
- The City: Marketplace of Ideas
- Why a City Grows
- What Keeps People Together
- The City and Government
- Why Must Cities Plan?
- Keeping Cities Up-to-Date
- The City and Transportation
- The City, Water, and Air

GRADE RECOMMENDATION: 3 - 6

TYPE OF ITEM: Filmstrips, recordings

PUBLISHER: SRA

OVERVIEW: Material is interdisciplinary and problem oriented. Stresses social issues that cities must cope with.

NAME OF SERIES: Education: Who Needs It?

SPECIFIC TITLES:

- Set I
  - Education--Who Needs It?
  - Health and Physical Education--Who Needs It?
  - Reading--Who Needs It?
  - Science--Who Needs It?
- Set II
  - Math: Who Needs It?
  - Music: Who Needs It?
  - Language Arts: Who Needs It?
  - Social Studies: Who Needs It?

GRADE RECOMMENDATION: 3 - 6

TYPE OF ITEM: Filmstrips, cassette tapes

PUBLISHER: Counselor Films, Inc.

OVERVIEW: Points out the importance of each area of the school curriculum by answering the question, "Why do we study ______________?"

NAME OF SERIES: Industry and Technology

SPECIFIC TITLES:

- Search for Power
- Donald and the Wheel
- Story of Iron and Steel
- Get the Message

GRADE RECOMMENDATION: 4 - 6

TYPE OF ITEM: Filmstrips, cassettes

PUBLISHER: Walt Disney Educational Materials

OVERVIEW: Contains information about communication, transportation, steel industry, and available energy resources. Takes each area from early discovery and used, through the present and into the future. Informative and entertaining.

NAME OF SERIES: Job Opportunities Now

SPECIFIC TITLES:
- Requirements in the World of Jobs
- Achieving Success in the World of Jobs
- Job Opportunities in a Restaurant
- Job Opportunities in a Hospital
- Job Opportunities in a Department Store
- Job Opportunities in a Super Market

GRADE RECOMMENDATION: 5 - 9

TYPE OF ITEM: Filmstrips, cassettes, guides

PUBLISHER: SVE

OVERVIEW: Provides information relative to job opportunities in several fields. Stresses jobs not requiring college degree. Emphasizes skills, attitudes, and education.

NAME OF SERIES: Learning the New International Road Signs

SPECIFIC TITLES:
- Introducing the New System
- Recognizing the Signs and Markings

GRADE RECOMMENDATION: 4 - 6

TYPE OF ITEM: Filmstrips, cassette

PUBLISHER: Eyegate

OVERVIEW: Makes children familiar with new signs and markings

NAME OF SERIES: Oceanography

GRADE RECOMMENDATION: 4 - 6

TYPE OF ITEM: Filmstrips, record

PUBLISHER: Education Activities

OVERVIEW: An introduction to the physical ocean and the resources found there.

NAME OF SERIES: People at Work

SPECIFIC TITLES:
Bakery
Toys and Dolls
Bubble Gum
Newspaper
Filmstrip
Comic Book

GRADE RECOMMENDATION: K - 6

TYPE OF ITEM: Filmstrips, cassettes, books

PUBLISHER: King Features

OVERVIEW: Popeye and Sweet Pea interview children concerning their products. Catchy music.

NAME OF SERIES: Targo Explores the World of Work

SPECIFIC TITLES:
Who's Got the Roller Coaster?
Pride of the Slippery Fish
Where's the Ice Cream?
Targo, the Job Explorer
Who's Cooking Targo?
Tale of a Nail

GRADE RECOMMENDATION: 1 - 4

TYPE OF ITEM: Filmstrips, cassettes

PUBLISHER: SVE

OVERVIEW: Demonstrates concepts about working world. Covers career clusters and brings out broad career awareness information through stories involving Targo.

NAME OF SERIES: Work World of Wheels

GRADE RECOMMENDATION: 3 - 6

TYPE OF ITEM: Filmstrip, cassette tapes, books, guide, student involvement sheets

PUBLISHER: Children's Press

OVERVIEW: Shows variety of occupations involved with "Wheels" and discusses skills and background needed. Stresses dignity and satisfaction of doing work well. VIP who work with cars, buses, and trucks.

KITS, PRINTS, PUZZLES, ETC.

NAME OF SERIES: Building Match-Ups

GRADE RECOMMENDATION: k-2

TYPE OF ITEM: Game

PUBLISHER: D.L.M.

NAME OF SERIES: Bulletin Board Cut-Outs

SPECIFIC TITLES:
Circus
Farm

GRADE RECOMMENDATION: K-2

TYPE OF ITEM: Cut-outs

PUBLISHER: Trend

NAME OF SERIES: Career Flash Cards

GRADE RECOMMENDATION: 3-6

TYPE OF ITEM: Flashcards

PUBLISHER: CFI

OVERVIEW: Unique cards where students recognize occupation portrayed

NAME OF SERIES: Career Identity Cards

GRADE RECOMMENDATION: K-2

TYPE OF ITEM: Game

PUBLISHER: D.L.M.

NAME OF SERIES: Community Helpers--7 Posters of Workers

GRADE RECOMMENDATION: K-2

TYPE OF ITEM: Posters

PUBLISHER: Trend

NAME OF SERIES: Complete Career Picture Kit

GRADE RECOMMENDATION: 4-6

TYPE OF ITEM: Photographs, explanations

PUBLISHER: Xerox Education Publications

OVERVIEW: Kits for 15 occupation clusters with photographs and explanations of the many workers in each occupation.

KITS, ETC.

NAME OF SERIES: Dimensions of Personality.

SPECIFIC TITLES:
- Now I'm Ready--Grade 1
- I Can Do It--Grade 2
- What About Me?--Grade 3

GRADE RECOMMENDATION: 1 -3

TYPE OF ITEM: Worktext, activity sheets, posters, and teacher's manual.

PUBLISHER: Pflaum/Standard

OVERVIEW: Deals mostly with self-awareness activities.

KITS, PRINTS, PUZZLES, ETC.

NAME OF SERIES: DUSO Kit D-1

SPECIFIC TITLES: (Unit Themes)
- Understanding and accepting Self
- Understanding Feelings
- Understanding Others
- Understanding Independence
- Understanding Goals and Purposeful Behavior
- Understanding Mastery
- Competence and Resourcefulness
- Understanding Emotional Maturity

GRADE RECOMMENDATION: K-2

TYPE OF ITEM: Manual, story books, posters, cassettes, hand puppets, puppet props, character puppets, activity cards, group discussion cards, role playing cards.

PUBLISHER: American Guidance Service, Inc.

OVERVIEW: Each set is involved with social and emotional development. The areas reflect specific concerns and common problems of children.

NAME OF SERIES: DUSO Kit D-2

SPECIFIC TITLES: (Unit Themes)
  Toward Self Identity
  Toward Friendship
  Toward Responsible Interdependence
  Toward Self Reliance
  Toward Resourcefulness and Purposefulness
  Toward Competence
  Toward Emotional Stability
  Toward Responsible Choice Making

GRADE RECOMMENDATION: 3-4

TYPE OF ITEM: Manual, story books, posters, cassettes, hand puppets, puppet props, character puppets, activity cards, group discussion cards, role playing cards.

PUBLISHER: American Guidance Service, Inc.

OVERVIEW: Each set is involved with social and emotional development. The areas reflect specific concerns and common problems of children.

NAME OF SERIES: Floor Puzzle--Occupations

GRADE RECOMMENDATION: K-2

TYPE OF ITEM: 29 Puzzle Pieces

PUBLISHER: Trend

NAME OF SERIES: Job Inset Puzzle

GRADE RECOMMENDATION: K-2

TYPE OF ITEM: Puzzle

PUBLISHER: D.L.M.

NAME OF SERIES: Job Puzzles and Puzzle Trays

GRADE RECOMMENDATION: K-2

TYPE OF ITEM: Puzzle

PUBLISHER: D.L.M.

NAME OF SERIES: Occupation Match-Ups

TYPE OF ITEM: Game

GRADE RECOMMENDATION: K-2

PUBLISHER: D.L.M.

NAME OF SERIES: Occupations Mix'n Match Puzzle

GRADE RECOMMENDATION: K-2

TYPE OF ITEM: Puzzle

PUBLISHER: Trend

NAME OF SERIES: Occupation Word Hunt I

GRADE RECOMMENDATION: K-2

TYPE OF ITEM: Game

PUBLISHER: D.L.M.

NAME OF SERIES: Occupation Word Hunt II

GRADE RECOMMENDATION: K-2

TYPE OF ITEM: Game

PUBLISHER: D.L.M.

NAME OF SERIES: Programmed Work Awareness Kit Level B

SPECIFIC TITLES:
- Playing Cards
- Game Board
- My Book of Workers
- Job Description Cards

GRADE RECOMMENDATION: K-4

TYPE OF ITEM: Cards, games, books

PUBLISHER: Chronicle Guidance

OVERVIEW: Deals with tools in many specific occupations. Includes role-playing activities and musical activities.

NAME OF SERIES: Toward Affective Development

GRADE RECOMMENDATION: 5-6

TYPE OF ITEM: Posters, activity cards, scarf, teachers' guide, job information cards, emotional spectrum cards.

PUBLISHER: American Guidance Service, Inc.

OVERVIEW: Stresses values, self awareness, and group dynamics.

NAME OF SERIES: Written Language Cards

GRADE RECOMMENDATION: K-2

TYPE OF ITEM: Game

PUBLISHER: D.L.M.

PUBLISHERS

American Guidance Service
Publisher's Building
Circle Pines, Minnesota 55014

Audiovisual Instructional
Devices, Inc.
Bayside, New York 11361

Benefic Press
10300 W. Roosevelt Road
Westchester, Illinois 60153

Career Futures, Inc.
1728 Cherry Street
Philadelphia, Pennsylvania 19103

Centron Educational Films
1621 W. Ninth Street
Lawrence, Kansas 66044

Children's Press
1224 W. Van Buren Street
Chicago, Illinois 60607

Chronicle Guidance
Moravia, New York 13118

Counselor Films, Inc.
2100 Locust
Philadelphia, Pennsylvania 19103

Developmental Learning Materials
7440 Natchez Avenue
Niles, Illinois 60648

Eye Gate
Jamaica, New York 11435

General Learning Corporation
Morristown, New Jersey

Harcourt, Brace, Jovanovich, Inc.
757 Third Avenue
New York, New York 10017

King Features
234 E. 45th Street
New York, New York 10017

Lerner Publishing Company
241 First Avenue North
Minneapolis, Minnesota 55401

McKnight Publishing Company
Bloomington, Illinois 61701

Macmillan Information
866 Third Avenue
New York, New York 10022

Miller-Brody Production, Inc.
342 Madison Avenue
New York, New York 10017

Pflaum/Standard
38 W. Fifth Street
Dayton, Ohio 45402

Random House Educational Media
Westminister, Maryland 21157

Society for Visual Education,
Inc.
1345 Diversey Parkway
Chicago, Illinois 60614

Trend Enterprises
St. Paul, Minnesota 55165

Xerox Education Publications
Education Center
Columbus, Ohio 43216

Yellow Pages Career Library
National Association Elementary
School Principals
1801 North Moore Street
Arlington, Virginia 22209